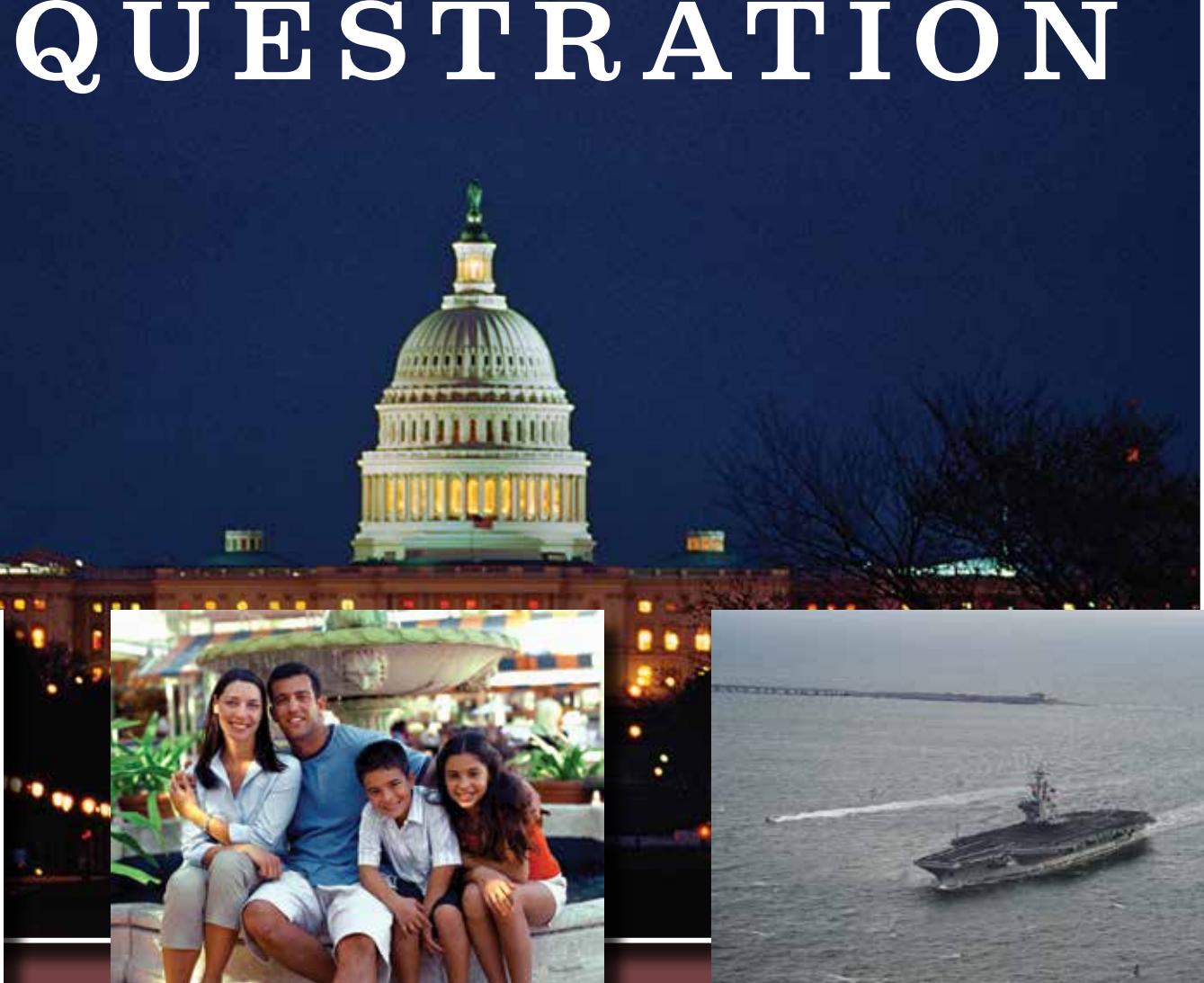
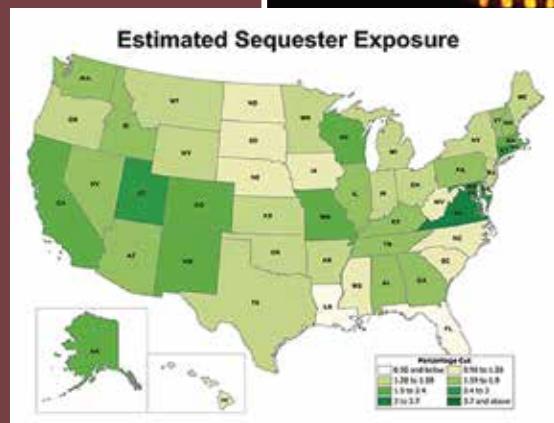


SEQUSTRATION



The State of the Region

HAMPTON ROADS 2013

REGIONAL STUDIES INSTITUTE | OLD DOMINION UNIVERSITY



Dear Reader:

This is Old Dominion University's 14th annual State of the Region report. While it represents the work of many people connected in various ways to the university, the report does not constitute an official viewpoint of Old Dominion, or its president, John R. Broderick. The State of the Region reports maintain the goal of stimulating thought and discussion that ultimately will make Hampton Roads an even better place to live. We are proud of our region's many successes, but realize it is possible to improve our performance. In order to do so, we must have accurate information about "where we are" and a sound understanding of the policy options available to us.

The 2013 report is divided into eight parts:

It Could Have Been (Much) Worse: Sequestration, it turns out, did not damage our regional economy nearly as much as originally anticipated. Unfortunately, some daunting economic challenges still loom on the horizon.

Our Housing Market Turns the Corner: At long last, residential home sales and prices are up, while unsold housing inventory and foreclosures are down.

Coal: A Very Important Economic Engine in Hampton Roads: More coal is exported from Hampton Roads than any other port in the United States. The annual economic impact of this coal activity on our region approaches \$1 billion.

Where Our City and County Governments Spend Their Money: City and county governments in our region focus their spending on education and public safety. However, the specific choices they make sometimes can be surprising. Governmental units now face politically difficult decisions, such as closing under-enrolled schools.

The Asian Indian Community of Hampton Roads: This "model" minority group in our region has attained significant economic success and civic influence.

Virtual Education at the K-12 Level in Hampton Roads: Online education in our region is growing rapidly in a laissez-faire manner that exhibits little accountability.

Mental Health Care in Hampton Roads: "Streeting," Guns and Budgets: Virginia no longer institutionalizes many mentally ill individuals, but mental health budgets are insufficient to meet demands. The Commonwealth's rather lax gun laws limit our ability to keep guns out of the hands of dangerously mentally ill people.

OK, Now What Should We Do? Is It Richard Florida's "Creative Classes" or Instead "Back to Basics" That Should Guide Our Future Regional Economic Growth? Richard Florida's "creative class" theory of why cities and regions grow is popular, but does not explain the world as well as traditional theories that focus on human capital and technology. This chapter recommends specific policies for our region that are more likely than Florida's to stimulate economic growth and critiques several hot, current policy issues.

Old Dominion University continues to provide support for this report. However, it would not appear without the vital backing of the private donors whose names appear below. They believe in Hampton Roads and in the power of rational discussion to improve our circumstances, but are not responsible for the views expressed in the report.

The Aimee and Frank Batten Jr. Foundation	Hampton Roads Chamber of Commerce
R. Bruce Bradley	Kaufman and Canoles
Ramon W. Breeden Jr.	Thomas Lyons
Arthur A. Diamonstein	Patricia W. and J. Douglas Perry
George Dragas Jr.	Anne B. Shumadine

The following individuals were instrumental in the research, writing, editing, design and dissemination of the report:

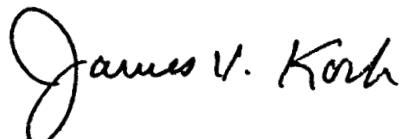
Vinod Agarwal	Steve Daniel	Janet Molinaro	Shara Weber
Kelly Brown	Elizabeth Janik	Ken Plum	Gilbert Yochum
Chris Colburn	Feng Lian	Ayush Toolsidass	
Vicky Curtis	Sharon Lomax	Gary Wagner	

Special recognition is due Vinod Agarwal and Gary Wagner of the Old Dominion University Economic Forecasting Project. Their penetrating analyses of the regional and Commonwealth economies are by consensus the baseline by which numerous economic activities are measured.

My hope is that you, the reader, will be stimulated by the report and will use it as a vehicle to promote productive discussions about our future. Please contact me at jkoch@odu.edu or 757-683-3458 should you have any questions.

All 14 of the State of the Region reports may be found at www.odu.edu/forecasting and www.jamesvkoch.com. Single paper copies may be purchased for \$25.

Sincerely,



James V. Koch

Board of Visitors Professor of Economics
and President Emeritus

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It Could Have Been (Much) Worse



IT COULD HAVE BEEN (MUCH) WORSE

Readers who are parents or grandparents may know the book "It Could Have Been Worse," written by the prolific A.H. Benjamin, who tells the story of the unexpected and unfortunate things that afflict a little mouse traveling on its way home. The mouse falls into puddles and gets stuck by thorns. Even so, much worse things could have happened to the mouse, including what could have turned out to be a fatal run-in with the neighborhood cat. Our mouse, however, successfully avoided such calamities, blissfully some of which it did not even know existed.

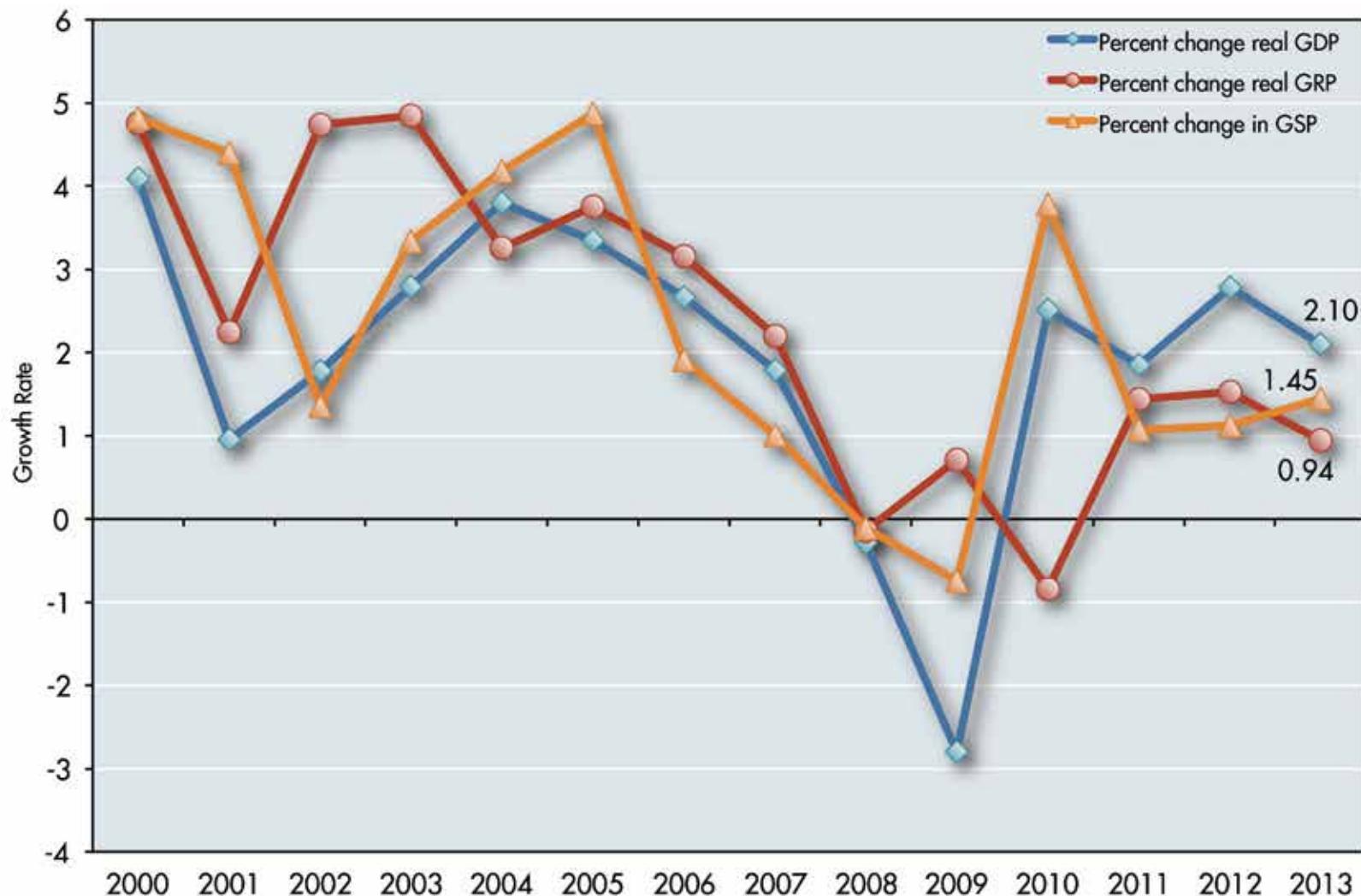
Hampton Roads in 2013 has traversed a path analogous to Benjamin's little mouse. We encountered some bumps in the road, but have avoided disaster. Sequestration (about which we will say more), reduced the value of our regional activity by about \$460 million this year and cost us approximately 4,000 jobs. Stagnant federal spending, especially by the Department of Defense (DOD), pushed down our annual real rate of regional economic growth to only 0.94 percent in 2013 (see Graph 1). This is less than half the national rate of economic growth and about a third less than the Commonwealth of Virginia economic growth rate.

Things weren't always this way. Table 1 reveals that between 2000 and 2007, our region never experienced an annual rate of economic growth below 2.2 percent and averaged 3.62 percent during that time period. We grew faster, economically, than the United States. If there is any balm to be had in this comparison, it is that the national economy has been more volatile than that of Hampton Roads since 2000; our ups and downs have been gentler.

TABLE 1			
ESTIMATED HAMPTON ROADS GROSS REGIONAL PRODUCT (GRP), NOMINAL AND REAL (PRICE ADJUSTED), 2000-2013			
Year	Nominal GRP Billions\$	Real GRP (2005=100) Billions\$	Real GRP Growth Rate Percent
2000	50.35	56.75	4.76
2001	52.64	58.02	2.24
2002	56.03	60.78	4.74
2003	59.99	63.72	4.85
2004	63.69	65.80	3.26
2005	68.27	68.27	3.75
2006	72.70	70.42	3.16
2007	76.46	71.97	2.20
2008	78.04	71.87	-0.14
2009	79.29	72.39	0.71
2010	79.67	71.78	-0.84
2011	82.54	72.81	1.44
2012	85.30	73.93	1.53
2013	87.52	74.62	0.94

Source: Old Dominion University Economic Forecasting Project. Data incorporate U.S. Department of Commerce personal income revisions through March 2013.

GRAPH 1
RATE OF GROWTH OF GDP (U.S.), GSP (VIRGINIA) AND GRP (HAMPTON ROADS)



Sources: Bureau of Economic Analysis and the Old Dominion University Economic Forecasting Project. Data on GDP incorporate latest Bureau of Economic Analysis revisions on July 31, 2013.

The Great Recession, Defense Spending And Sequestration

THIS ECONOMIC SLOWDOWN HAS BEEN DEEP AND LONG

The Great Recession that began in December 2007 (according to the National Bureau of Economic Research) has been the deepest and longest economic slowdown the U.S. has experienced since the Depression of the 1930s. Graph 2 illustrates this by focusing on employment and jobs lost. One can see that the current economic malaise cost the country more jobs than any other major post-World War II recession, but also is lasting longer. At the current rate of U.S. job recovery, it will be September 2014 (80 months from the beginning of the recession) before we, as a country, will have recovered all of the jobs we lost between 2008 and 2010.

Why has this recession been so deep and the subsequent recovery so “job free”? Economists Kenneth Rogoff and Carmen Reinhardt have explored these topics in “This Time Is Different.” They point out that economic contractions caused by crises in a country’s financial system (at the very least, a contributing factor in the U.S. recession) destroy consumer and investor confidence and threaten the fundamental stability that is so critical to hiring and purchasing decisions. Economic actors pull in their horns and it takes them a long time to change their behavior. Hence, recessions with a strong financial component take much longer to iron out than recessions caused by simple cyclical reductions in demand.

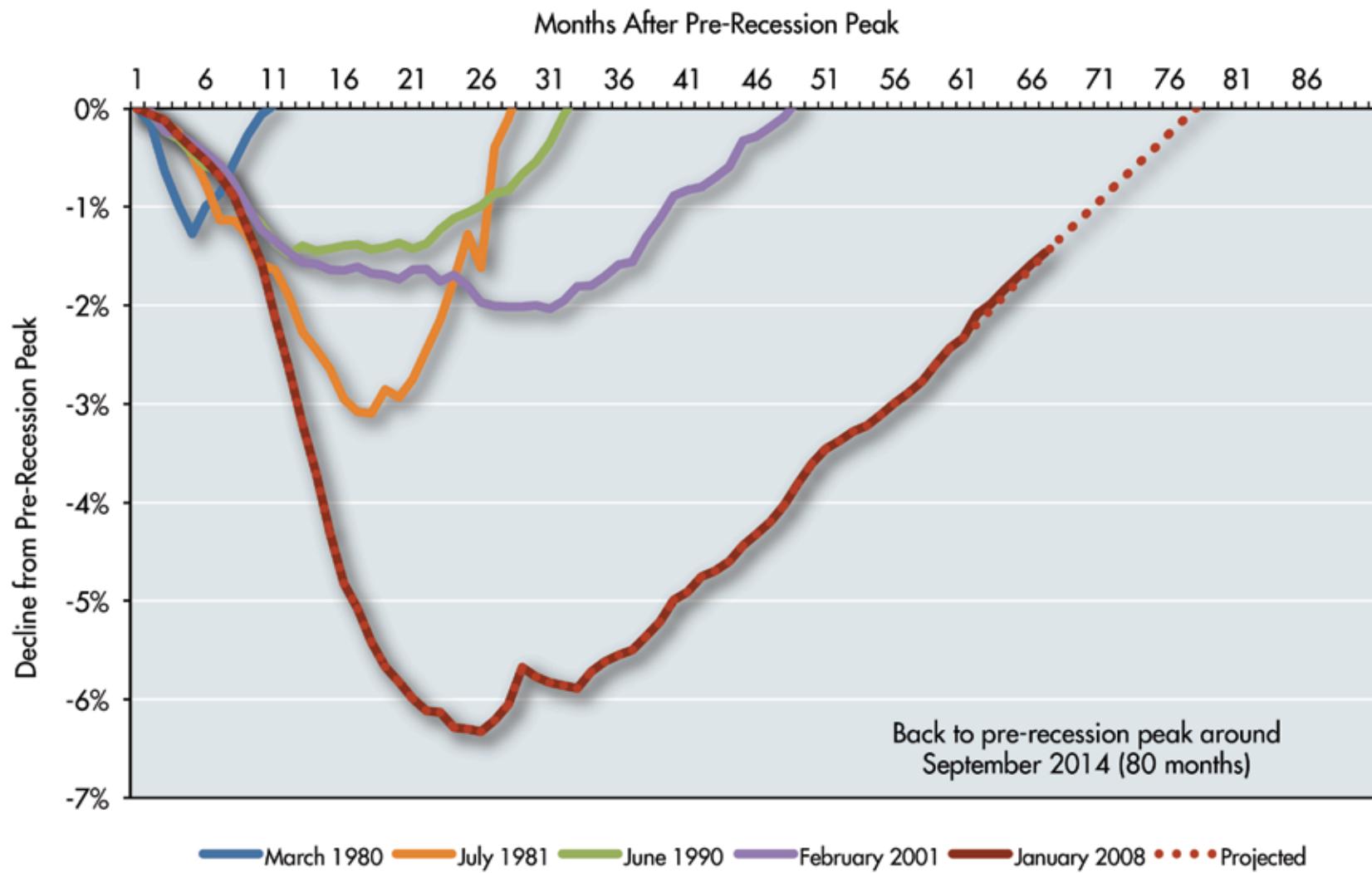
When thinking about our jobless recovery, it is also important to understand that we live in an era in which accelerating technological change often is labor saving in nature. Machines and computers are substituted for people. Caterpillar, for example, now produces about triple the physical output it did 20 years ago, but does so with about half the number of workers. Over the long run, this is a desirable development. Our collective standard of living increases

when workers and resources can be saved and shifted to other pursuits. In the short run (and this is at least several years in length), however, workers lose their jobs and often find it difficult to land new jobs, especially if they are not well educated, or are anchored to a given location, perhaps because they own a house that is financially underwater.

In the short run, job recovery also has been retarded by the increasing globalization of economic activity. Barbers and hairstylists in Portsmouth or Newport News don’t have to worry about competition from barbers and hairstylists in Shanghai or Jakarta. However, employees at firms such as Stihl or Smithfield Foods do have to worry about Shanghai and Jakarta because they produce *tradable goods* whose prices are set in international markets. Employees working at such firms must compete head-to-head with workers around the world. Literally, these workers must prove their cost-effectiveness on a daily basis, or they will see their jobs disappear.

There are encouraging signs that the terms of international trade are moving in the favor of the United States. American workers continue to become more productive; U.S. firms are benefiting from the lower costs of important inputs such as natural gas; the cost advantages of competitors such as China are being eroded by rapidly rising wages there and increasing transportation costs; and the value of the dollar has declined over time, making U.S. goods less expensive in the eyes of foreign consumers. These developments, however, are gradual in nature and competition in tradable goods continues to make some U.S. firms reluctant to hire new workers, especially when uncertainties exist about the cost of these employees because of health care and other factors.

GRAPH 2
COMPARING THIS RECESSION TO OTHERS: JOB RECOVERY IN THE U.S.



Sources: Bureau of Labor Statistics and the Old Dominion University Economic Forecasting Project

A Closer Look At Job Markets In Hampton Roads

While 2013 will see very modest job growth in Hampton Roads, in 2012 private-sector employment in our region did grow approximately 10,000 from the fourth quarter of 2011 to the fourth quarter of 2012, with professional and business services, health care and social assistance, and manufacturing leading the way (see Table 2). Numerically, our private sector has performed reasonably well; our employment problem is governmental in nature – federal, state and local governments all have reduced their employment levels over the past few years and only began to reverse that trend in 2012.

Graph 3 illustrates that job recovery in Hampton Roads has trailed both Virginia and the U.S. since 2007. Indeed, employment in our region still is far below its previous high in July 2007. Our region lost approximately 40,000 jobs between 2008 and 2010 (see Graph 4) and by the end of 2012, we had recovered fewer than 10,000. As we soon shall see, faltering defense spending is the major culprit here. Rather than our regional economy adding more than 5,200 jobs in 2013, we will only add about 1,200 jobs.

TABLE 2

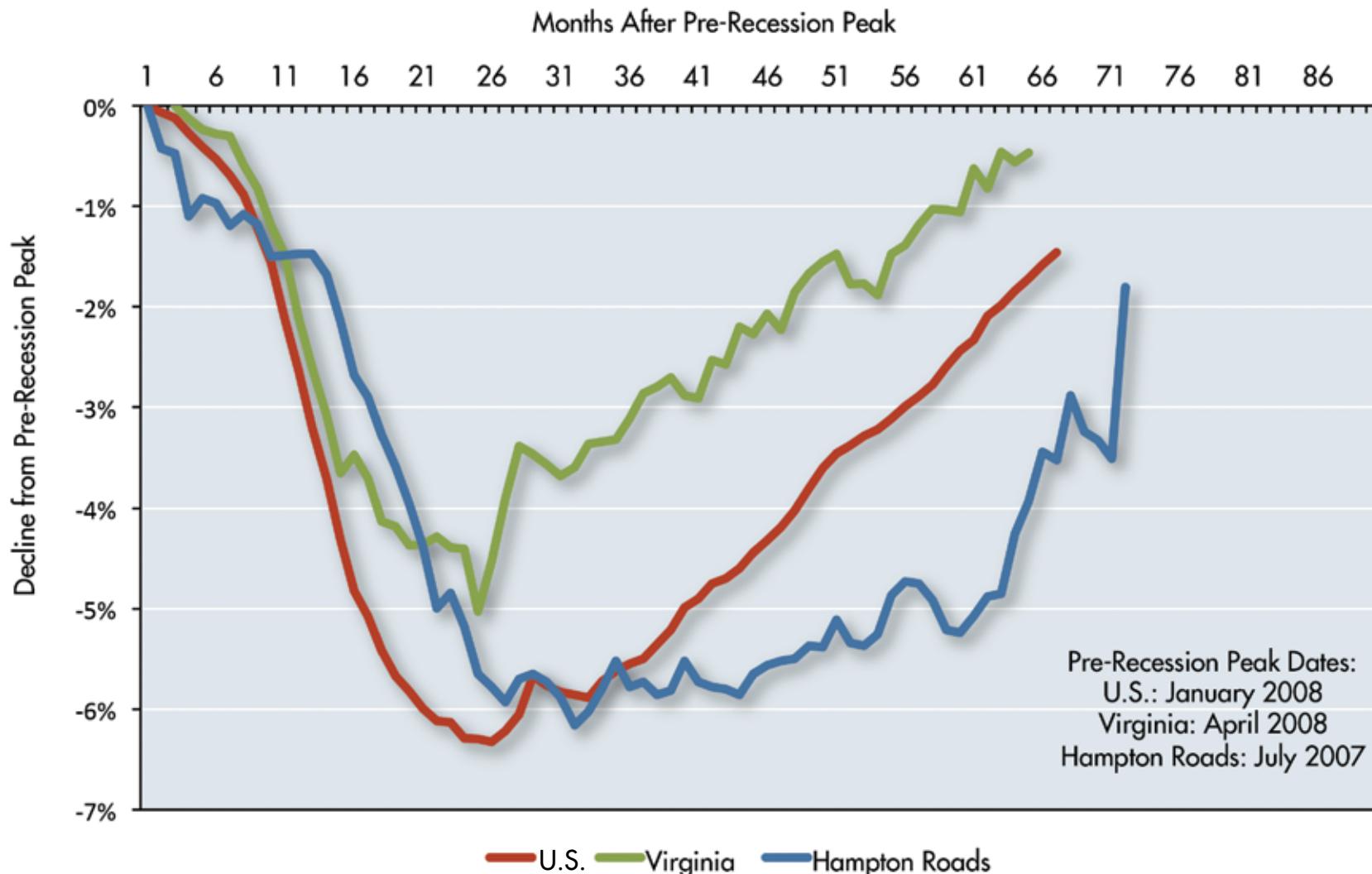
THE "HOT SECTORS" FOR JOB GROWTH IN HAMPTON ROADS: FOURTH QUARTER 2011 TO FOURTH QUARTER 2012

Sector	Fourth Quarter 2011	Fourth Quarter 2012	Jobs Gained
Total Nonfarm Employment	740,400	751,130	10,730
Private Sector	578,600	588,500	9,900
Health Care & Social Assistance	81,530	84,530	3,000
Manufacturing	52,170	54,970	2,800
Professional & Business Services	99,400	101,370	1,970
Construction	34,570	36,100	1,530
Financial Activities	36,630	37,970	1,340
Government Sector	161,800	162,630	830
State Government	22,470	23,170	700

Sources: Bureau of Labor Statistics and the Old Dominion University Economic Forecasting Project

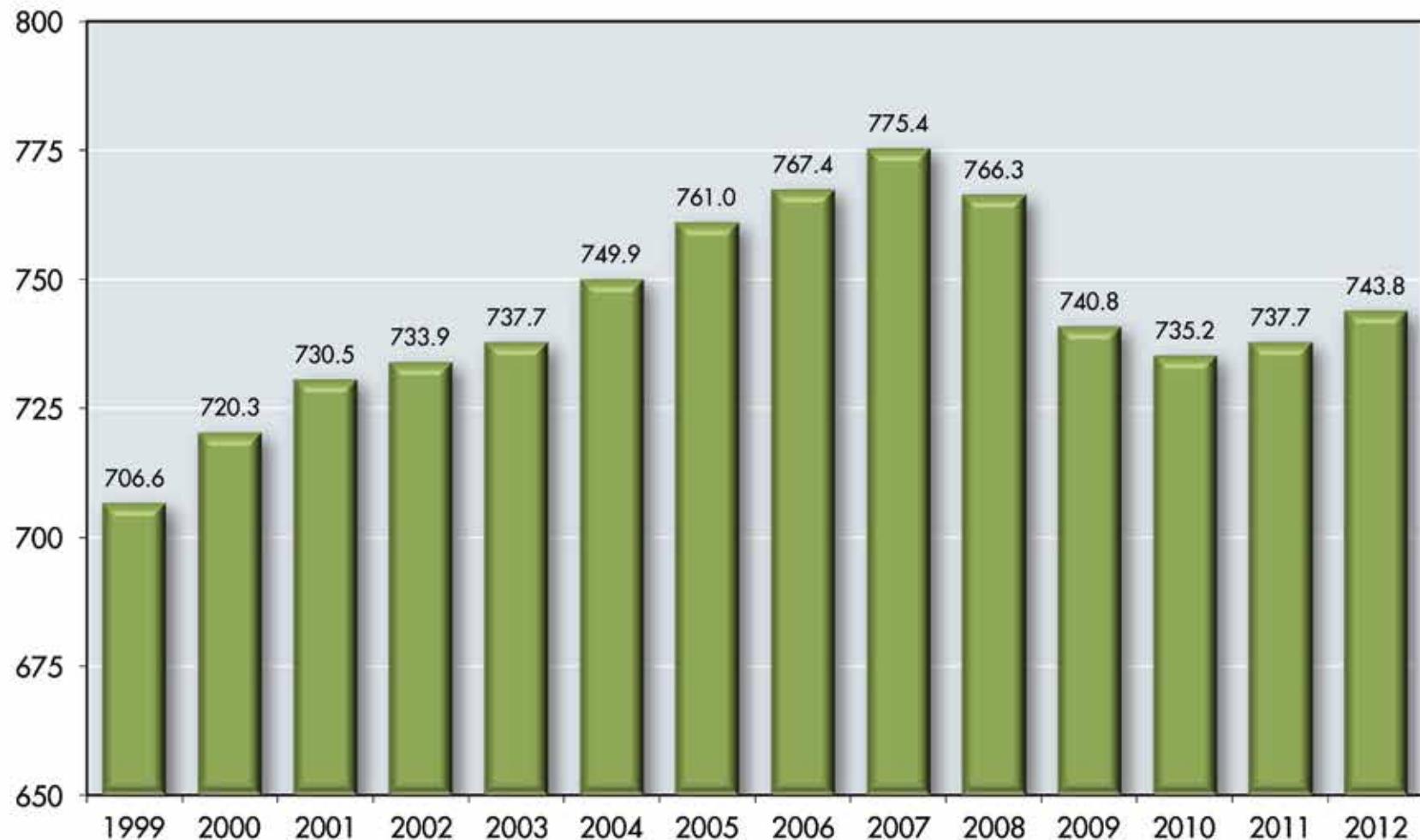
GRAPH 3

RECESSION RECOVERY IN THE U.S., VIRGINIA AND HAMPTON ROADS MEASURED BY TOTAL JOBS RESTORED, 2007-2013



Sources: Bureau of Labor Statistics and the Old Dominion University Economic Forecasting Project

GRAPH 4
TOTAL CIVILIAN EMPLOYMENT (JOBS) IN HAMPTON ROADS, 1999-2012



Sources: U.S. Department of Labor CES data and the Old Dominion University Economic Forecasting Project. Data are not seasonally adjusted.

Defense Spending

The “Big Three” sectors in the economy of Hampton Roads are defense spending, the Port of Virginia and hotels/tourism. Of these three, defense spending easily is the most important and in 2013 will account for \$21.13 billion in direct spending in our region. This is down slightly from the all-time high of \$21.97 billion in 2012 (see Graph 5).

In the first State of the Region report, produced in 2001, we noted that the Hampton Roads economy was heavily dependent on defense spending and we needed to diversify our economic base. We've said much the same thing every year since then and now can report (see Graph 6) that over the past two years, we've become slightly less dependent on defense spending than we were in the past.

Alas, this is occurring mostly for the wrong reasons. In 2013, defense spending accounted for 44.7 percent of our gross regional product, down from 48.5 percent in 2011. Nevertheless, the major reason for this is that defense spending in Hampton Roads actually declined in 2013. It isn't that our private sector has been growing by leaps and bounds (though it has been growing). Instead, the decreasing relative importance of defense spending primarily reflects fewer DOD dollars being spent in Hampton Roads. We've diversified, but not under the scenario we'd prefer.

While our region maintains its reputation as a military town, Table 3 demonstrates the reality that military employment has declined significantly over the past two decades. We now have approximately 93,000 active-duty military personnel in Hampton Roads (down about 35 percent from our high of about 143,000 in 1989) and approximately 35,600 DOD civilian employees (down about 15 percent from our high of about 42,000 in 1990).

Nevertheless, we haven't felt as much of a negative economic impact from these reduced employment numbers as one might expect because the compensation of those people who kept their jobs increased significantly. Table 3 shows how and why. **Between 2001 and 2011, total military compensation**

paid in Hampton Roads rose 67 percent and total federal government civilian employee compensation rose 71.2 percent, compared to only a 40.6 percent growth in total private nonfarm compensation.

In a nutshell, fewer government employees (military and civilian) have been paid much more for their work in recent years. Table 4 reports average compensation per active-duty military person during the same time period; one can see it rose 97.9 percent, compared to 32.7 percent in the private sector. Average compensation here includes all fringe benefits, including housing allowances, and reflects the need for the military to attract and retain personnel in the absence of a military draft.

This helps explain why median household income in Hampton Roads increased faster than median household income in the United States in the 15 years between 1998 and 2013 (see Graph 7). The primary engine for this development was the significant increase in compensation received by DOD personnel in our region. That's why the share of total compensation received by private-sector employees in Hampton Roads actually decreased between 2001 and 2011 (as Graph 8 confirms). Put simply, DOD employees fared much better in terms of compensation than the typical private-sector employee in our region over that decade.

Table 5 provides wage data (if this were compensation, the reported percentages in this table would increase by perhaps one-fourth) for specific sectors of the Hampton Roads economy between the fourth quarter of 2003 and the fourth quarter of 2012. **Private-sector wage growth in Hampton Roads trailed that of DOD employees in every major employment classification, and in retail trade was strikingly low (only 15.8 percent over nine years).** To provide context, consider that the CPI-U (Consumer Price Index for all urban consumers) rose 24.6 percent during the same period. Thus, the wages of many workers in Hampton Roads did not keep up with inflation.



TABLE 3

**GROWTH IN EMPLOYMENT AND TOTAL COMPENSATION
(WAGES, SALARIES AND FRINGE BENEFITS) FOR
MILITARY, FEDERAL CIVILIAN GOVERNMENT AND PRIVATE
NONFARM SECTORS, HAMPTON ROADS,
1991 TO 2000 AND 2001 TO 2011**

	Percent Change 1991-2000	Percent Change 2001-2011
Military Employment	-21.3%	-15.6%
Military Compensation	13.2%	67.0%
Federal Civilian Government Employment	-20.6%	15.9%
Federal Civilian Government Compensation	13.3%	71.2%
Private Nonfarm Employment	21.4%	5.9%
Private Nonfarm Compensation	68.0%	40.6%

Sources: U.S. Bureau of Economic Analysis (BEA) and the Old Dominion University Economic Forecasting Project. *BEA refers to compensation as earnings.

TABLE 4

ESTIMATED AVERAGE COMPENSATION (WAGES, SALARIES AND FRINGE BENEFITS) FOR SELECTED CATEGORIES IN HAMPTON ROADS, 2001 AND 2011

	Earnings in 2001	Earnings in 2011	Percent Increase
Military	\$56,811	\$112,436	97.9%
Federal Civilian Government Employees	\$70,742	\$104,504	47.7%
State and Local Government Employees	\$38,730	\$52,924	39.5%
Private Sector	\$32,988	\$43,783	32.7%

Sources: U.S. Bureau of Economic Analysis (BEA) and the Old Dominion University Economic Forecasting Project. *BEA refers to compensation as earnings.

TABLE 5

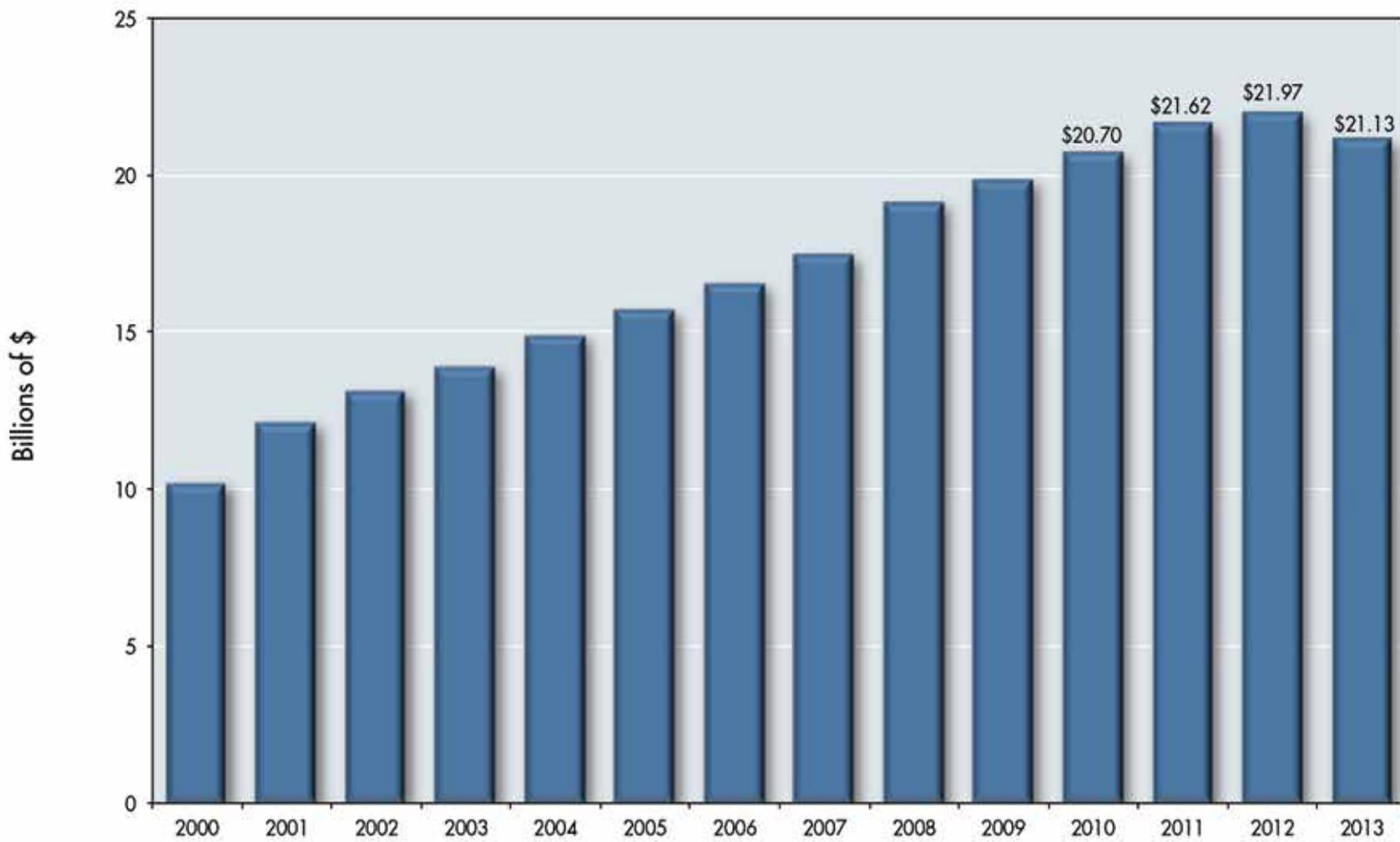
AVERAGE PRIVATE-SECTOR WEEKLY WAGES IN SELECTED INDUSTRIES IN HAMPTON ROADS, 2003 AND 2012

Industry	4th Quarter 2003	4th Quarter 2011	Change
Construction	\$709	\$938	\$229 (32.3%)
Manufacturing	\$908	\$1,126	\$218 (24.0%)
Wholesale Trade	\$947	\$1,208	\$261 (27.6%)
Retail Trade	\$405	\$469	\$64 (15.8%)
Transportation and Warehousing	\$790*	\$1,049	\$259 (32.8%)
Information	\$795*	\$1,033	\$238 (29.9%)
Finance and Insurance	\$867	\$1,190	\$323 (37.3%)
Professional and Business Services	\$1,075	\$1,442	\$367 (34.1%)
Health Care and Social Assistance	\$696*	\$896	\$200 (28.7%)
Accommodation and Food Services	\$242	\$301	\$59 (24.4%)

Sources: U.S. Department of Labor Quarterly Census of Employment and Wages in Private Sector and the Old Dominion University Economic Forecasting Project. Wage data for the Transportation and Warehousing and Information industries are second quarter 2005. Data for Health Care and Social Assistance are first quarter 2007.

GRAPH 5

ESTIMATED DIRECT DOD SPENDING IN HAMPTON ROADS, 2000-2013



Sources: U.S. Department of Defense and the Old Dominion University Economic Forecasting Project (includes federal civilian and military personnel and procurement)

GRAPH 6

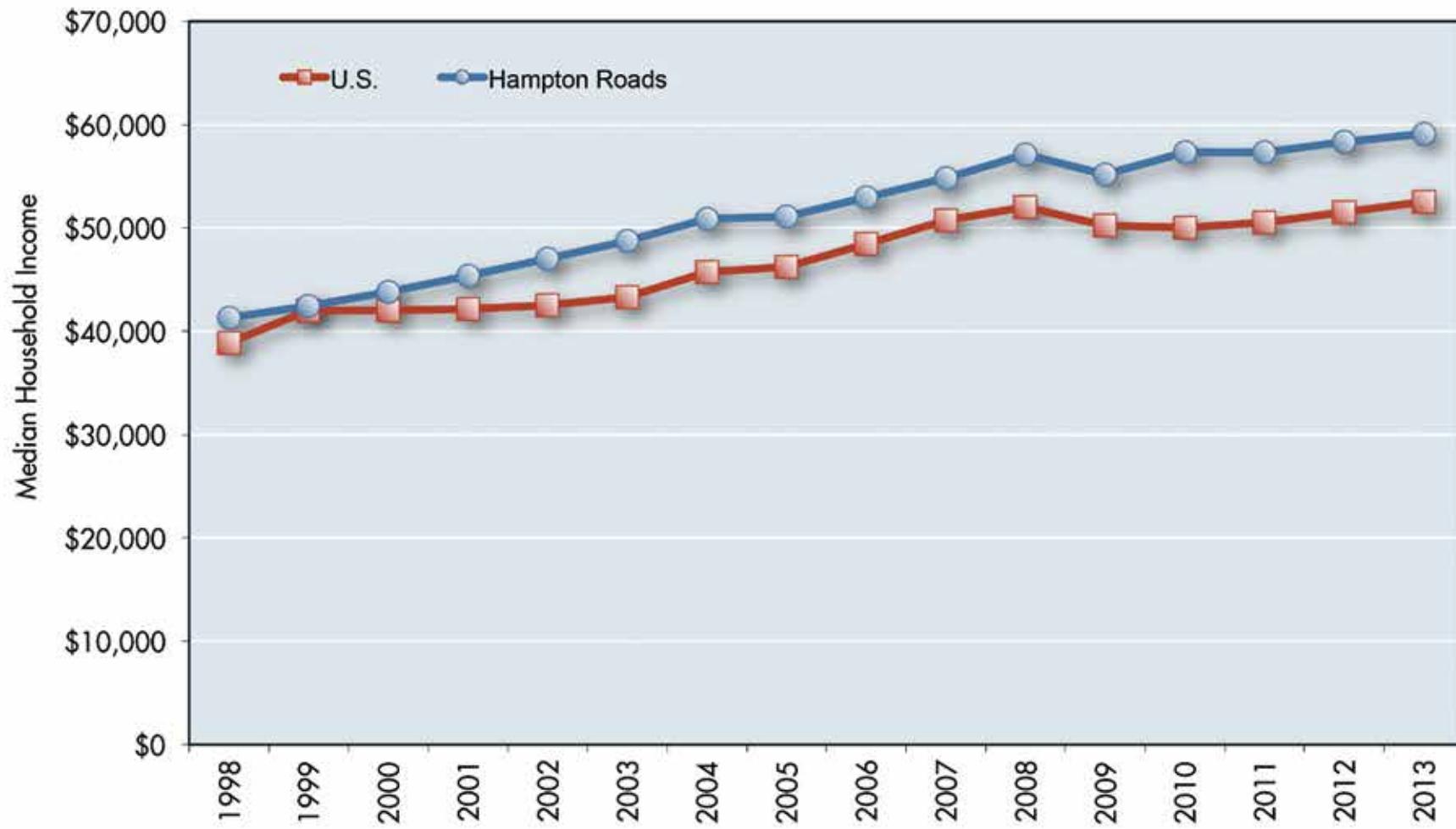
HAMPTON ROADS GROSS REGIONAL PRODUCT ATTRIBUTABLE TO DOD SPENDING, 1984-2013



Sources: U.S. Department of Defense, U.S. Department of Commerce and the Old Dominion University Economic Forecasting Project

GRAPH 7

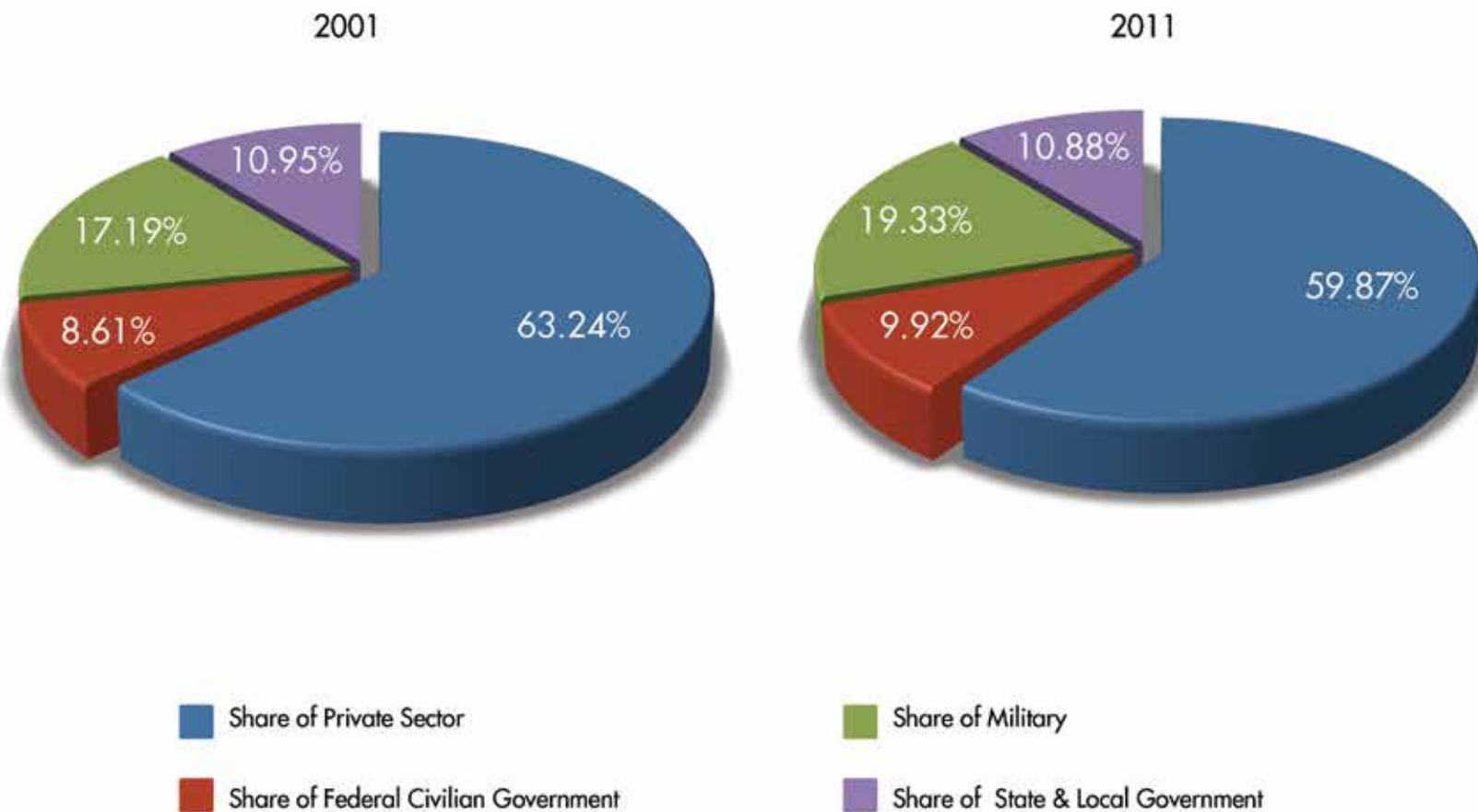
COMPARISON OF MEDIAN HOUSEHOLD INCOME: HAMPTON ROADS AND THE U.S., 1998-2013



Sources: U.S. Census Bureau and the Old Dominion University Economic Forecasting Project

GRAPH 8

SHARES OF SELECTED SECTORS MEASURED BY TOTAL COMPENSATION FOR HAMPTON ROADS, 2001 AND 2011



Sources: U.S. Bureau of Economic Analysis (BEA) and the Old Dominion University Economic Forecasting Project. *BEA refers to compensation as earnings.

SEQUESTRATION AND THE FUTURE

If one can dodge an economic bullet, then Hampton Roads almost did so with respect to sequestration. **As Table 6 reveals, in January 2013 we estimated that our gross regional product would grow 1.45 percent and that we would gain 5,207 jobs – if sequestration could be avoided. We now expect reduced federal expenditures in Hampton Roads because of sequestration to shave 0.51 percent from our growth this year (about \$460 million in current dollars). This will cause our region to grow at a paltry 0.94 percent rate and will wipe out most of the jobs we had expected to gain this year (3,966 out of 5,207).**

Still, as was true for A.H. Benjamin's little mouse, it could well have been worse. Our original estimate of the impact of sequestration was that it would cost the region about 17,000 jobs. However, Congress and the executive branch reduced the impact of sequestration on defense spending and granted many federal agencies spending flexibility so that they could prioritize their cuts. The combination of these two adjustments has been quite beneficial to our region.

Even so, there are more cuts on the horizon. Graph 9 contrasts three different DOD spending regimes. The dark blue line reflects the probable path of the base line DOD budget between FY 2009 and FY 2012 in the absence of any cuts or reductions. The red line depicts cuts in base line spending already agreed to by Congress and the president. These reductions amount to \$483.7 billion and are spread over approximately nine fiscal years. They are already in process. Once can see that we will feel their major impact in the first two fiscal years; thereafter, base line DOD spending resumes its predicted increase.

The green line illustrates cuts in DOD spending because sequestration has been invoked as a result of the Budget Control Act of 2011. These cuts also are front-loaded in the first two fiscal years; they

amount to another \$482.5 billion through fiscal year 2021. Once the DOD has adjusted to these cuts in the first two fiscal years, base line DOD spending once again will increase at predictable rates.

"Base line" is an important notion and conceptually is best understood as representing the Pentagon's permanent budget. Thus, the base line budget does not include DOD spending for special, "temporary" purposes such as Iraq and Afghanistan.

The bottom line is that defense spending in Hampton Roads will take a major hit in FY 2013 (\$42.5 billion) and a lesser hit in FY 2014 (\$12.5 billion). Thereafter, it is likely to resume its march upward and thus we may well now be living through our darkest economic days. However, the situation is hardly static; circumstances change from week to week because of new decisions and guidance by Congress and the president. It would be unwise to assume that we now have a clear road map for our regional economic future.

In any case, absent international crises that stimulate defense spending, 2013 and 2014 are unlikely to be remembered fondly in economic terms. It is likely that we will experience slow income growth, an inability to reduce

TABLE 6

SEQUSTRATION: THE BOTTOM LINE IMPACT ON HAMPTON ROADS FOR 2013			
	January 2013 Estimates	Revisions After Sequestration	Effect of Sequestration
Real GRP Growth in 2013	1.45%	0.94%	-0.51%
Job Gains/Losses in 2013	+ 5,207 (0.70%)	1,241 (0.17%)	-3,966

Notes: Nominal GRP in 2011 is estimated to be \$82.36 billion and DOD spending is estimated to be \$20.75 billion.
All of the regional reductions and losses are estimates of the Old Dominion University Economic Forecasting Project based upon the overall percentage cuts in national defense spending estimated by the CBO or CSBA.

unemployment rates, stagnant retail sales and only moderate increases in housing prices.

However, it is not only the absolute level of DOD spending in Hampton Roads that should be of concern to us, but also the mix of those expenditures. The need of the DOD to curtail expenditures significantly could lead it to consider "big-ticket" expenditure cuts.

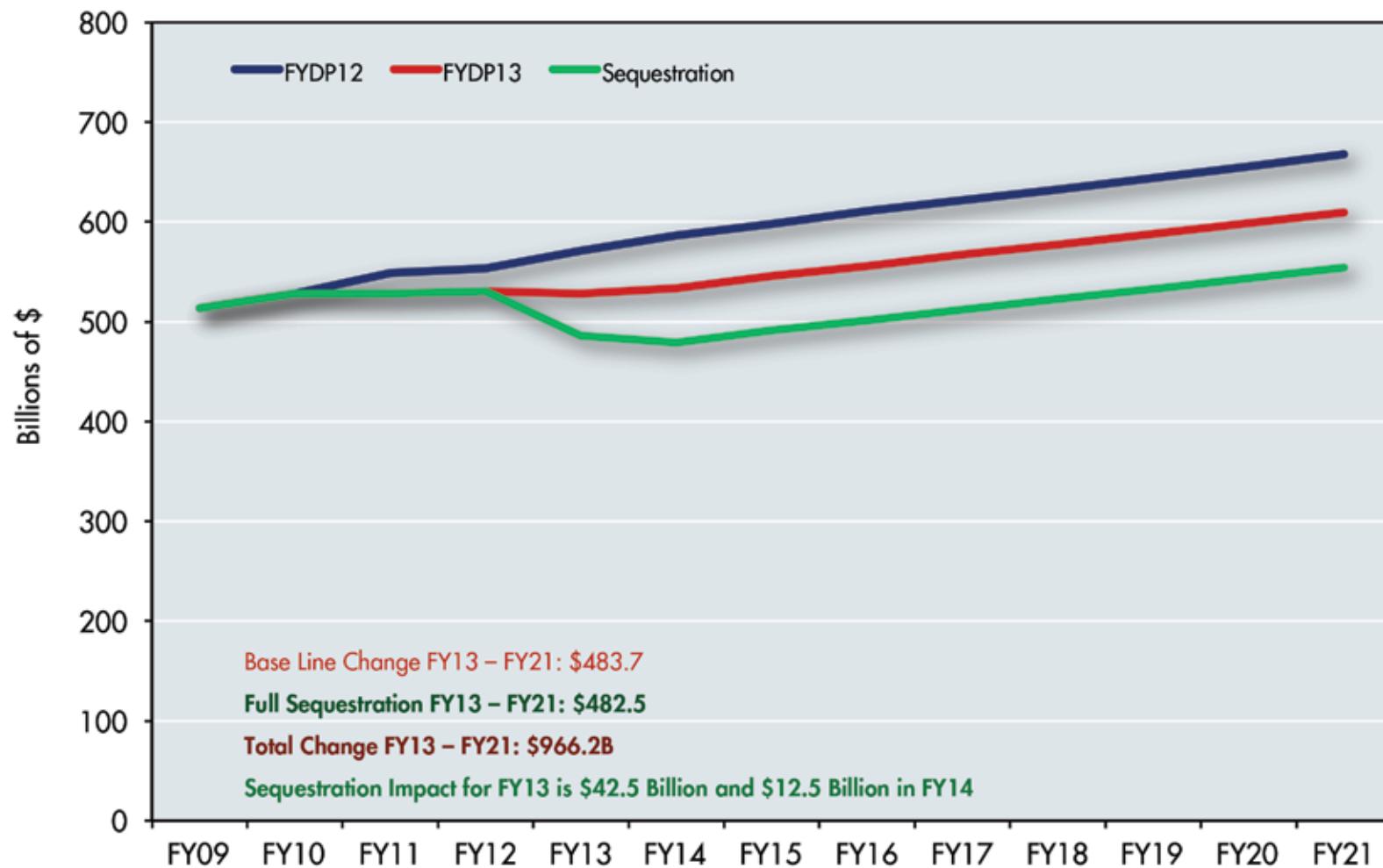
Here are some of our potential regional vulnerabilities over this decade:

- **Congress invokes another BRAC process designed to close or downgrade military facilities and programs.**
- **The number of aircraft carrier groups is permanently reduced by one or two.**
- **One aircraft carrier group is transferred to the Pacific (former Secretary of Defense Leon Panetta did not disclose such a move, but did specifically indicate a refocusing of naval assets in the Pacific).**
- **Naval construction and repair in the region are delayed or reduced.**
- **The number of aircraft at Oceana Naval Air Station is reduced.**
- **Annual military compensation increases fall significantly as salary increases become smaller, and personnel are required to pay for larger proportions of their medical expenses.**
- **The DOD concludes that major floating assets such as aircraft carriers no longer are as useful and defensible as they once were, and this leads the DOD to focus its expenditures elsewhere.**

- **Rapid increases in the prices of significant military assets (ships, airplanes, etc.) continue and simply make it impossible for the DOD to purchase and maintain as many as before. This leads to fewer homeported ships, smaller numbers of airplanes located in Hampton Roads and reduced construction and repair activity.**
- **Rising sea levels in Hampton Roads prompt the U.S. Navy to give much stronger consideration to relocating its assets.**

This is a long list and may appear to some to resemble a Chicken Little, "the sky is falling" inventory of unlikely circumstances. We should hope this is the case; if it is not, then our region is in for bad economic times.

GRAPH 9
DEPARTMENT OF DEFENSE BASE BUDGETS, FY 2009 TO FY 2021



Sources: DOD Budget Requests for FY11, FY12 and FY13, the Congressional Budget Office and the Old Dominion University Economic Forecasting Project

REDUCTIONS IN DEFENSE SPENDING TRANSLATE TO SLOWER ECONOMIC GROWTH AND FEWER JOBS

Because defense spending is the primary engine for our region's economy, reductions in that spending substantially determine how rapidly or slowly our economy grows. **We've already seen that Hampton Roads lost jobs between 2007 and 2012. Most other comparable regions of the country lost jobs also, but proportionately not as many as we did.** Table 7 reveals that between 2003 and 2012, job growth in Hampton Roads trailed five comparable metropolitan areas in the Southeast, as well as Virginia, North Carolina and the United States.

Flaccid job growth did not mean unusually high unemployment. For many years, unemployment rates in our region have been lower than those in the U.S. This has continued to be true in this century. One can see in Graph 10 that our average rate of unemployment in 2013 will be about 6 percent, well below the U.S. average of 7.6 percent. In addition, not as many people in our region filed for unemployment compensation, suggesting an improved labor market (see Graph 11).

Nonetheless, how can our regional rate of unemployment fall (as it has every year since 2010) when our regional job growth has been so miserable? There are two primary reasons. First, we have experienced a net out-migration of adults from Hampton Roads. The DOD has located personnel elsewhere and private-sector job seekers have left the region in search of better employment opportunities.

Second, as has been true nationally, labor force participation rates have fallen in Hampton Roads (see Graph 12 for national data). This means that many adults have dropped out of the labor force and no longer are actively seeking a job. An aging population accounts for a small portion of this decline, as does the rising proportion of people who are pursuing postsecondary education. Further, there has been a significant increase in the number of adults who have claimed disabilities that prevent them from working. But, here's the payoff – if you aren't looking for work, then you can't be counted as unemployed. The upshot is that

our low regional rate of unemployment is not quite so shining an achievement as it first seems. For a variety of reasons – not always good – some people simply have stopped looking for work.

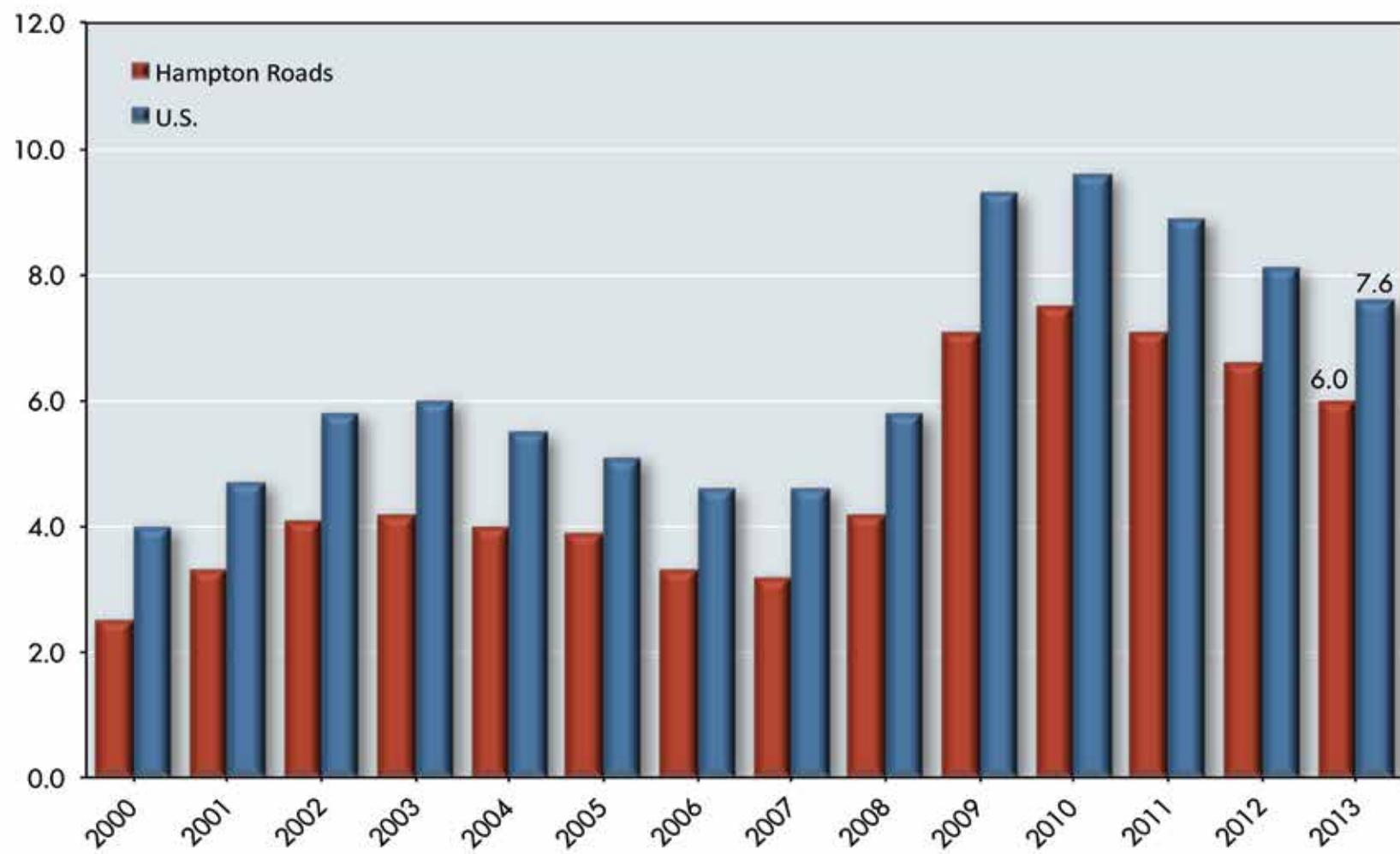
TABLE 7

COMPARING CIVILIAN JOB GAINS AND LOSSES IN HAMPTON ROADS TO OTHER REGIONS AND THE U.S., 2003-2012

Area	2003-07	2007-12	2003-2012 Loss and Percent of Total
Hampton Roads	37.7	-31.6	6.1 (.83%)
Charlotte*	96.1	-7.9	82.2 (11.57%)
Durham	29.7	-2.6	27.1 (10.59%)
Jacksonville	70.7	-36.2	34.5 (6.15%)
Raleigh	84.5	2.0	86.5 (19.87%)
Richmond	45.4	-9.9	35.59 (6.04%)
U.S.	7,545.0	-3,906	3,639 (2.80%)
Virginia	269.5	-41.5	228.0 (6.52%)
North Carolina	354.4	-153.2	201.2 (5.31%)

Sources: U.S. Department of Labor CES seasonally unadjusted data and the Old Dominion University Economic Forecasting Project. *Peak employment in Charlotte, Durham, Raleigh and Virginia occurred in 2008. Changes for these areas are shown for 2003 through 2008 and 2008 through 2012.

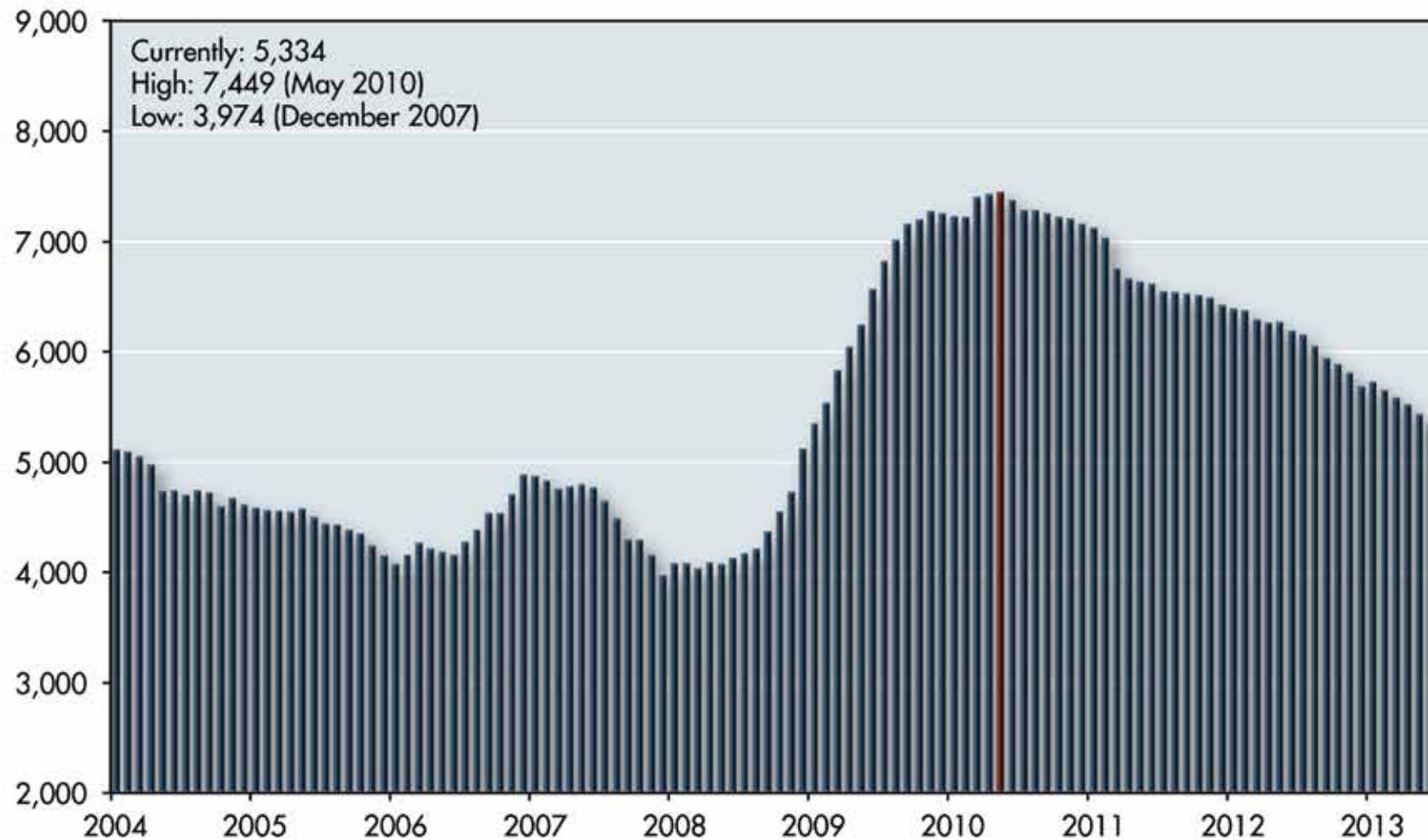
GRAPH 10
HAMPTON ROADS AND U.S. UNEMPLOYMENT RATES, 2000-2013



Sources: U.S. Department of Labor and the Old Dominion University Economic Forecasting Project. Data are not seasonally adjusted.

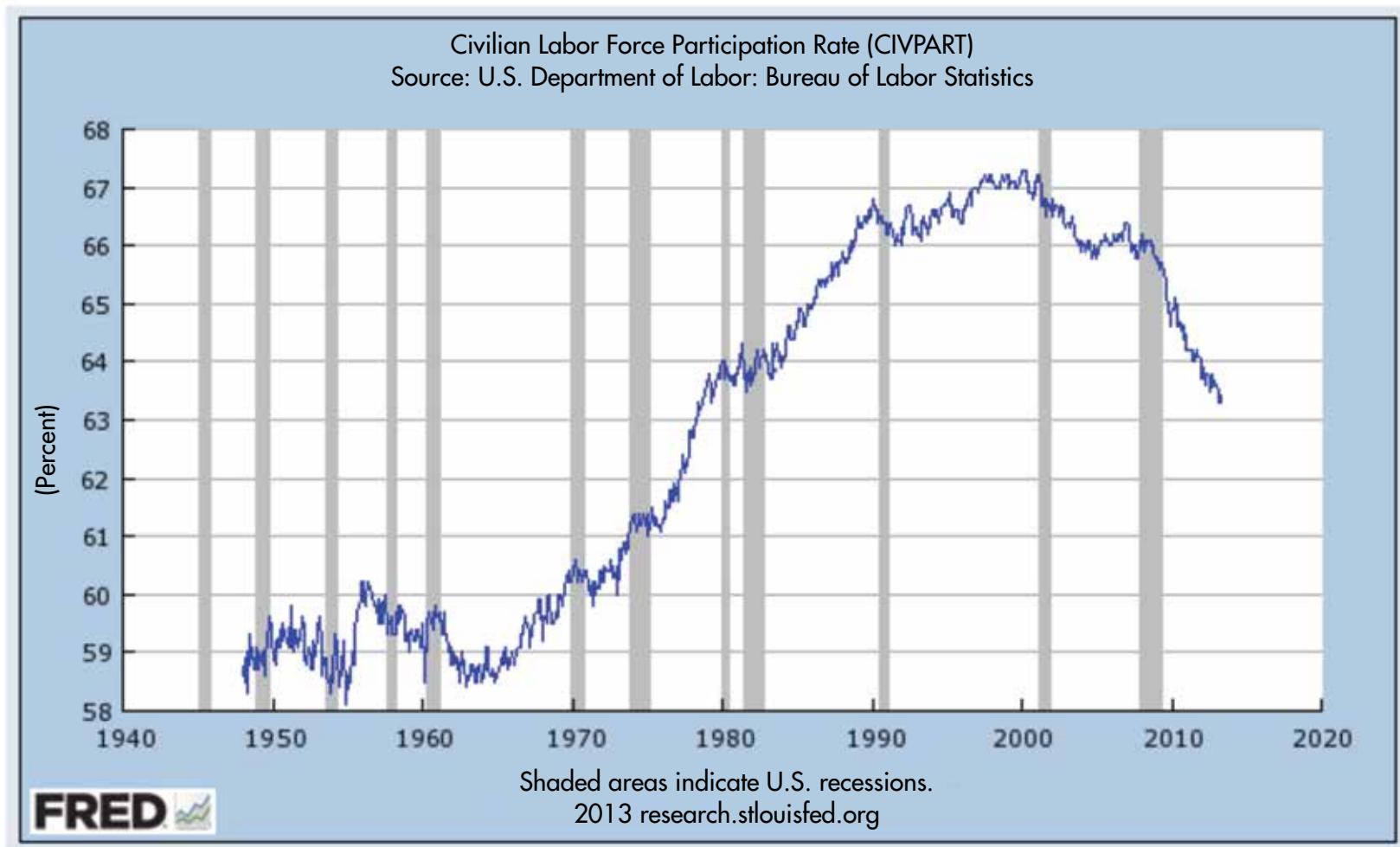
GRAPH 11

**MONTHLY INITIAL UNEMPLOYMENT CLAIMS FOR HAMPTON ROADS, JANUARY 2004 THROUGH MAY 2013
(12-MONTH MOVING AVERAGE)**



Sources: Virginia Employment Commission and the Old Dominion University Forecasting Project

GRAPH 12
FALLING CIVILIAN LABOR FORCE PARTICIPATION RATE, U.S. ADULTS, 1973-2013



Source: FRED, Federal Reserve Bank of St. Louis, www.stlouisfed.org, accessed June 19, 2013

The Port Of Virginia

2012 was a year of change and dramatic uncertainty for the Port of Virginia. Falling market shares and tonnage between 2008 and 2011 (see Graph 13) were among the reasons cited by Gov. Bob McDonnell when he sacked all but one member of the board of the Virginia Port Authority. APM Maersk then submitted what was termed an unsolicited bid to take over the management of the Port; this soon resulted in two other credible competitive proposals along with the possibility that the existing management arrangement with Virginia International Terminals would continue. Most of the senior leadership of the Port of Virginia exited.

Many people and businesses connected to the Port made it known that they were opposed to privatizing its management, citing, *inter alia*, a fear that a private manager would not serve them as well and might whipsaw them against other ports with respect to rates and services. Several legislators filed proposed legislation that would have slowed or prevented Virginia's secretary of transportation (who was tasked by the governor with the responsibility to assess the privatization proposals and make a recommendation) from moving ahead on privatization.

The three privatization applicants (though one dropped out along the way) pointed out that nearly all of the major ports in the United States have some or all of their operations managed by private operators. They pledged transparency, guarantees against whipsawing and increased cargo activity. Further, they promised the Commonwealth payments that variously were evaluated as having current values in the range of \$3 billion to \$4 billion spread over 50 to 60 years. This was more than enough to get the attention of those seeking funds that might deal with transportation and toll-related issues in the region.

The newly appointed membership of the board of the Port Authority ultimately decided not to accept any of the privatization proposals, but simultaneously moved to reorganize the structure and operation of the Port of Virginia to eliminate duplication, save money and increase market share.

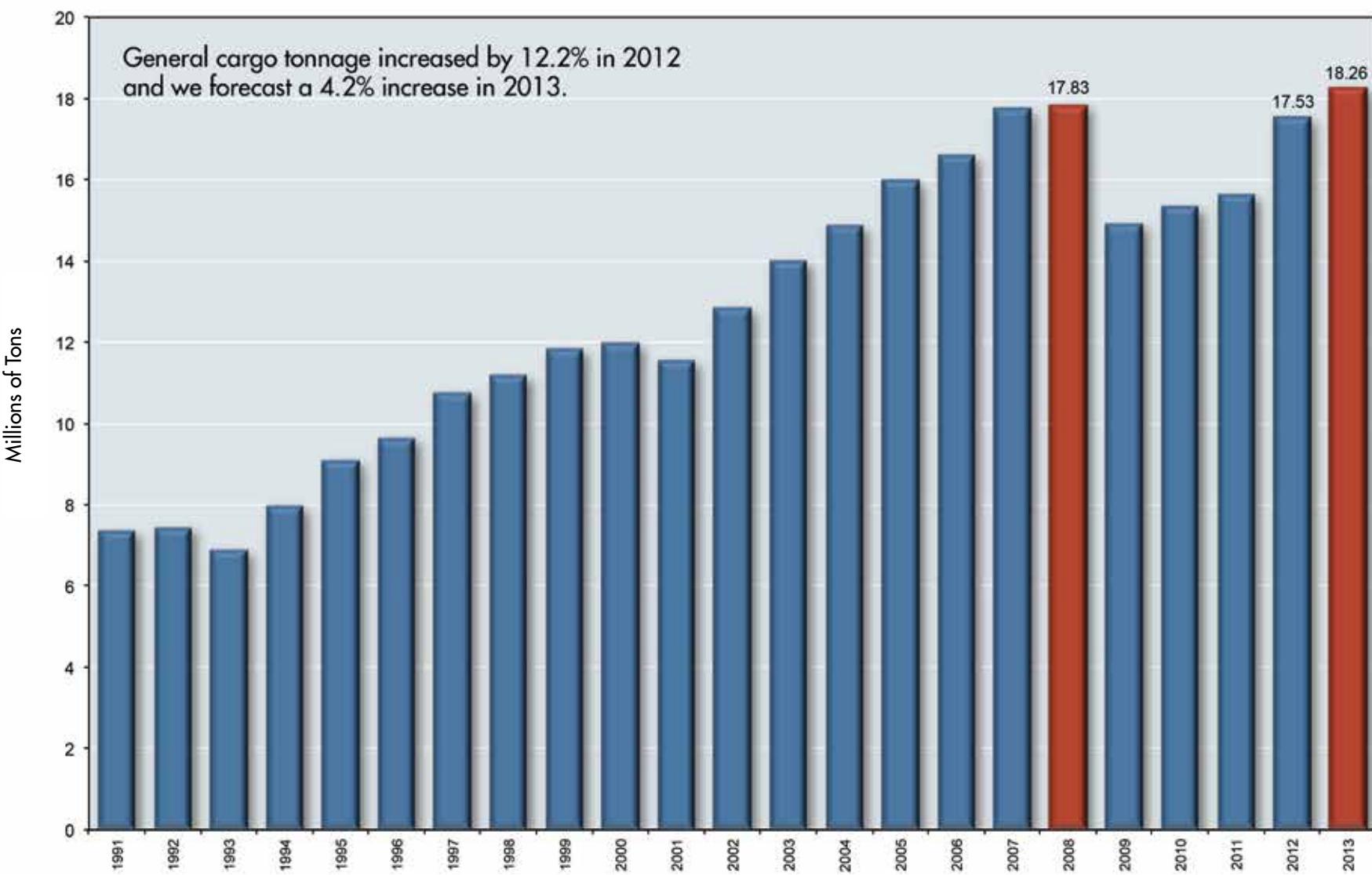
In any case, activity at the Port rebounded magnificently in 2012 and continued to increase in 2013, though at more modest rates. Twenty-foot equivalent container units (TEUs) increased by 9.8 percent in 2012 and we forecast they will increase 5.1 percent in 2013 (see Graph 14). Further, as Graph 15 discloses, after several years of losing market share along the East Coast, the Port of Virginia reversed this trend in 2012 and 2013, but not yet sufficiently to restore its share to its recent peak level in 2007.

An additional positive development is the increased use of rail connections to take cargo from the Port to customers. As a rule of thumb, cargo that is destined for customers located within 200 to 250 miles of an East Coast port is delivered by truck. Such "close in" cargo often is referred to as "captive" because it is unlikely any competitor port can take it away because hauling costs are highly sensitive to increasing distance. Beyond the 200- to 250-mile radius from the port, however, cargo is "discretionary" and a variety of ports potentially compete for that traffic. To the south, Savannah and Charleston are major competitors; to the north and midwest, Baltimore and New York/New Jersey (particularly the latter) provide the major competition, and customers located in sites such as Chicago potentially can take bids from four or five different ports.

Hence, it is very good news that the share of containers moving in and out of the Port of Virginia via rail connections has been increasing and now accounts for almost one-third of all of the containers exiting Hampton Roads (see Graph 16). This means that the Port of Virginia is winning competitive battles over which ports along the East Coast will handle discretionary cargo.

Realistically, the recent success of the Port of Virginia reflects the conjunction of many different factors, among them the completion of Norfolk Southern's Heartland Rail Corridor to the Midwest, which permits the double stacking of TEUs; a new streamlined service to Greensboro, N.C.; CSX's on-dock rail services at the APM Terminal in Portsmouth; the Port's ability to handle deep-draft ships; more first-in, first-out service for ships coming and going; local efficiencies; and improved management. **The payoff to Hampton Roads will be more jobs and higher incomes.**

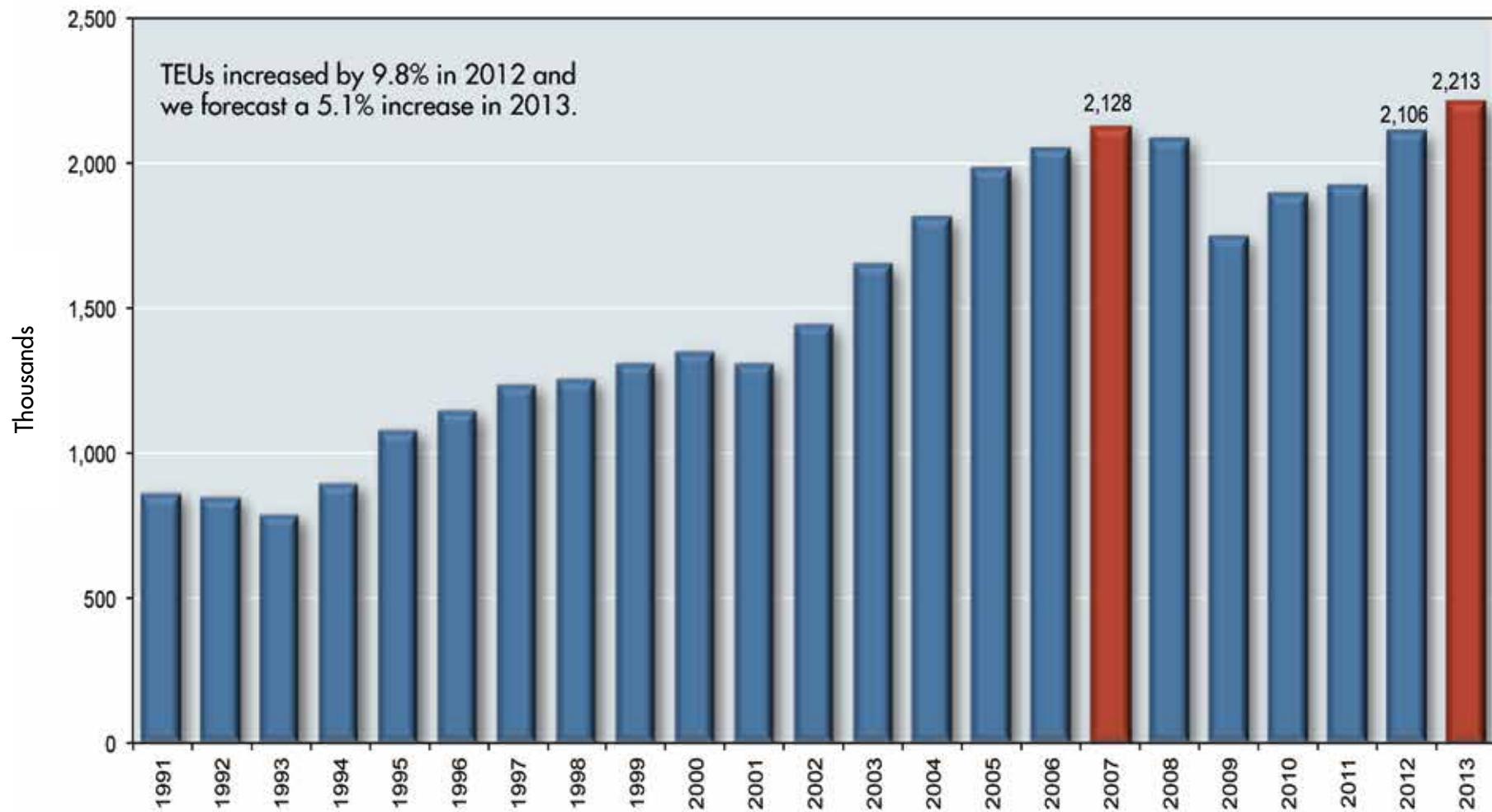
GRAPH 13
GENERAL CARGO TONNAGE AT THE PORT OF HAMPTON ROADS, 1991-2013



Sources: Virginia Port Authority and the Old Dominion University Economic Forecasting Project

GRAPH 14

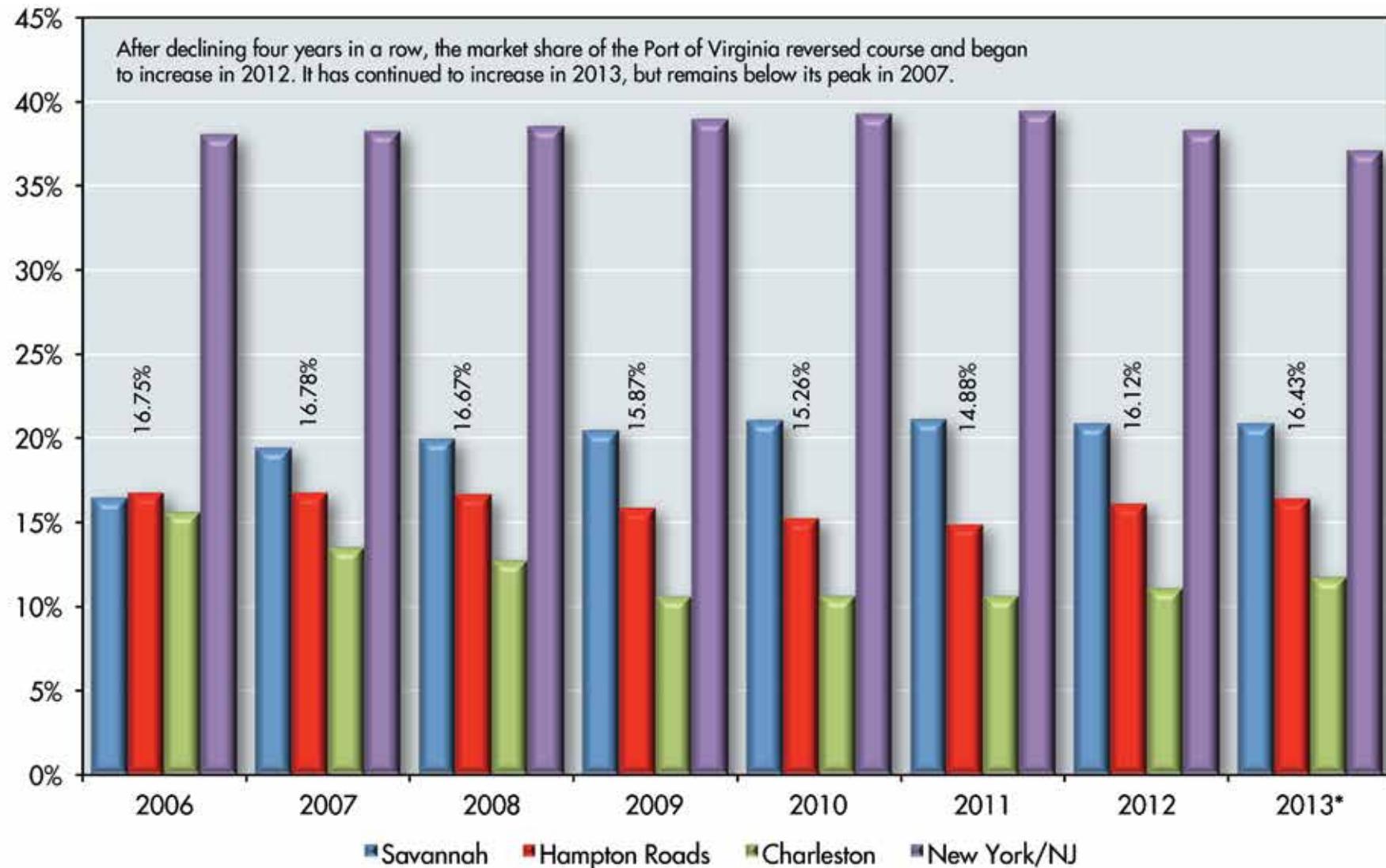
TWENTY-FOOT EQUIVALENT CONTAINER UNITS (TEUs) IN THE PORT OF HAMPTON ROADS, 1991 TO 2013



Sources: Virginia Port Authority and the Old Dominion University Economic Forecasting Project

GRAPH 15

SHARES OF TOTAL LOADED TEU CONTAINERS FOR SELECTED PORTS ON THE EAST COAST, 2006-2013*

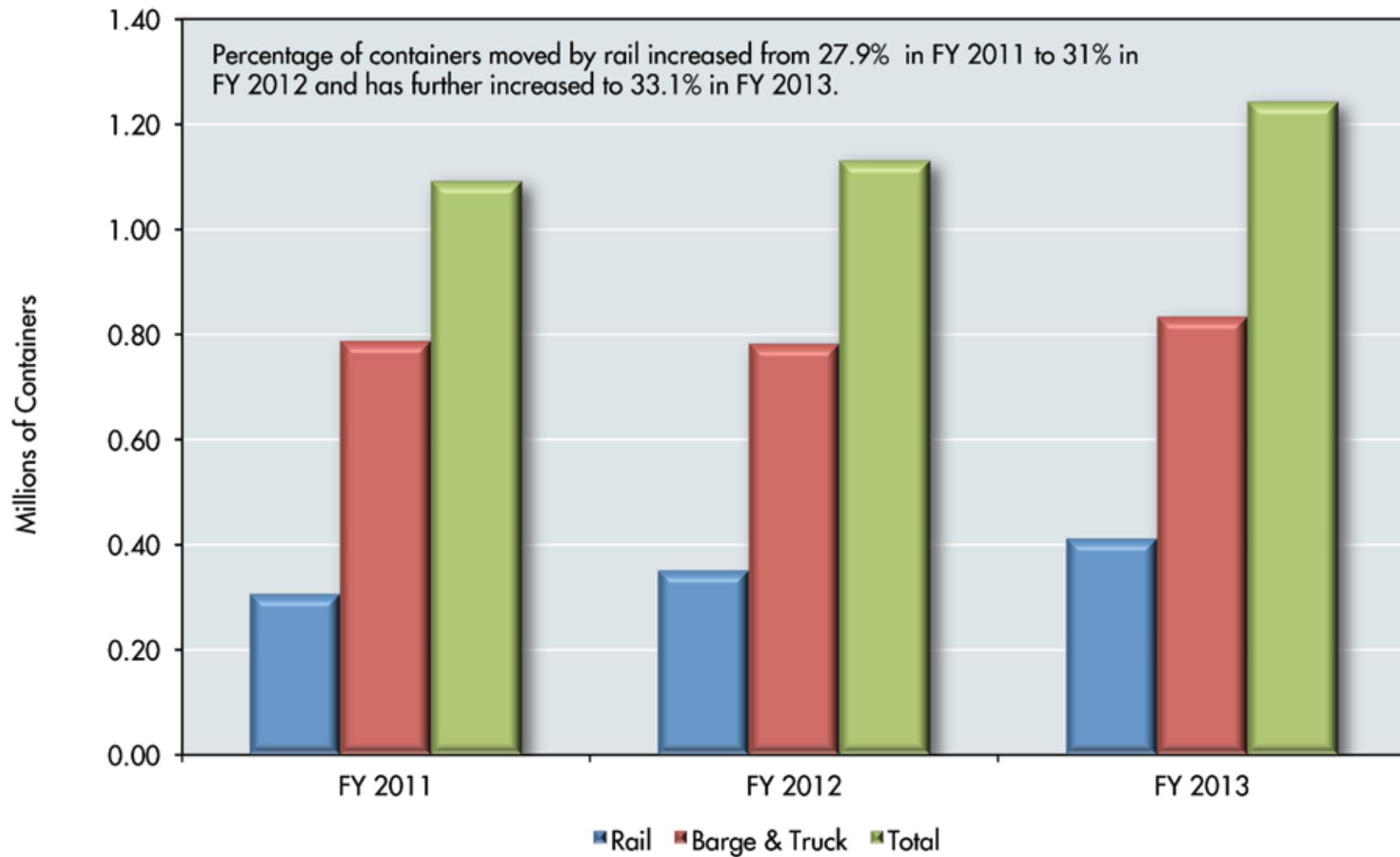


Sources: American Association of Port Authorities and the Old Dominion University Economic Forecasting Project. Market shares exclude TEUs for Philadelphia, Miami, Palm Beach and Port Everglades.

*Data for 2013 are through May.

GRAPH 16

MOVEMENT OF CONTAINERS AT THE PORT OF HAMPTON ROADS BY TYPE OF TRANSPORTATION, 2011-2013



Sources: Virginia Port Authority and the Old Dominion University Economic Forecasting Project

Tourism And Hotels

The recession hit the region's tourism industry so hard and collectively that the industry has yet to recover. Graph 17 reveals that hotel revenue in Hampton Roads still is well below its 2007 record high. The coin of the realm, however, in measuring the efficiency and success of hotels and motels is REVPAR, revenue received per available room. One can see in Table 8 that REVPAR in Hampton Roads for 2012 still was 9.96 percent below the 2007 level, with only Virginia Beach counteracting the negative trend within the region.

If Virginia Beach (the region's largest tourist destination) is enjoying increased REVPAR, this implies that the other cities are experiencing declining REVPAR. In the case of Newport News/Hampton, REVPAR was down 13.59 percent between 2007 and 2012, while Norfolk/Portsmouth's REVPAR was down 10.97 percent. The big losers, however, were Chesapeake/Suffolk (-18.79 percent) and Williamsburg (-22.18 percent). Graph 18 discloses that Williamsburg's share of regional hotel revenues fell dramatically from 30.6 percent in 1999 to only 17.8 percent in 2012.

While REVPAR in both Chesapeake/Suffolk and Williamsburg has been suffering, their situations are different. **One can see in Graph 19 that Chesapeake/Suffolk's problem is that it overbuilt hotel capacity, especially between 2008 and 2010.** More people were staying in Chesapeake/Suffolk's hotels during this time (primarily business travelers), but not nearly enough to soak up the huge increases in rooms available. Thus, REVPAR fell. This situation is remediable, however. The number of available rooms held almost constant between 2011 and 2012, and continued increases in the use of these rooms gradually will eliminate the excess capacity.

Williamsburg (effectively, the Historic Triangle, which includes Jamestown and Yorktown) confronts very different circumstances. Room capacity has not increased in recent years and actually is about 8 percent less than it was in 2000. It is apparent from Graph 20 that Historic Triangle room rentals have declined substantially since 2000 (though they have been

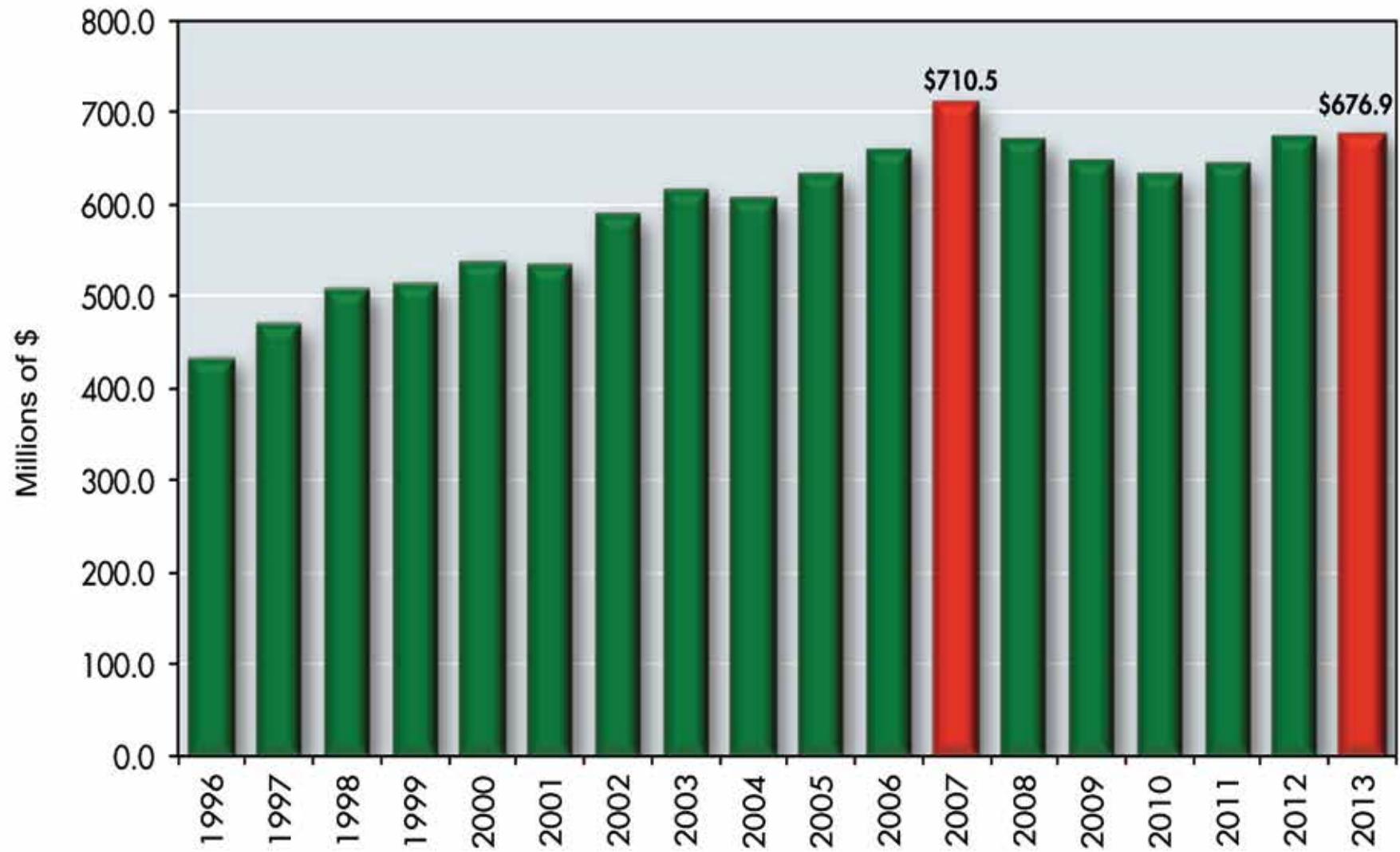
roughly constant since 2009). The Historic Triangle appears to face a long-term challenge attracting tourists, especially younger tourists who, as the 1960s pop song opines, perhaps "don't know much about history" – or care much – and may have short, smartphone-induced attention spans. It may be easier for Virginia Beach to attract repeat visitors to its oceanfront amenities than for the Historic Triangle to convince tourists to return there. It will suffice to say that the Historic Triangle has its work cut out in terms of marketing its wonderful attractions in a fashion that will attract additional visitors. It is a cultural and historical gem, as well as a major employer, and it is in the best interests of Hampton Roads that it achieve financial success.

TABLE 8
REVPAR IN SELECTED MARKETS, 2007 AND 2012

	2007	2012	Percentage Change
Virginia	\$61.95	\$57.12	-7.80%
U.S.	\$65.52	\$65.17	-0.60%
Hampton Roads	\$52.90	\$47.63	-9.96%
Myrtle Beach	\$53.92	\$51.44	-4.91%
Ocean City	\$71.12	\$68.80	-3.91%
Coastal Carolina	\$55.84	\$54.09	-1.32%
Virginia Beach	\$64.75	\$66.10	+2.12%
Norfolk/Portsmouth	\$54.05	\$48.12	-10.97%
Newport News/ Hampton	\$41.49	\$35.85	-13.59%
Chesapeake/Suffolk	\$52.90	\$42.96	-18.79%
Williamsburg	\$47.48	\$36.95	-22.18%

Sources: Smith Travel Research Trend Reports, Jan. 18, 2013, and the Old Dominion University Economic Forecasting Project

GRAPH 17
HOTEL REVENUE IN HAMPTON ROADS, 1996-2013

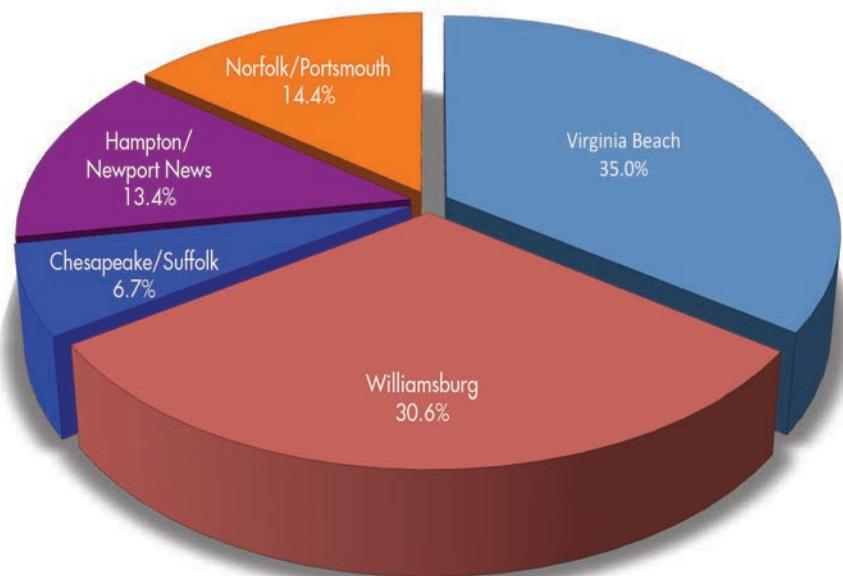


Sources: Smith Travel Research, Dec. 27, 2007, and April 25, 2013, and the Old Dominion University Economic Forecasting Project

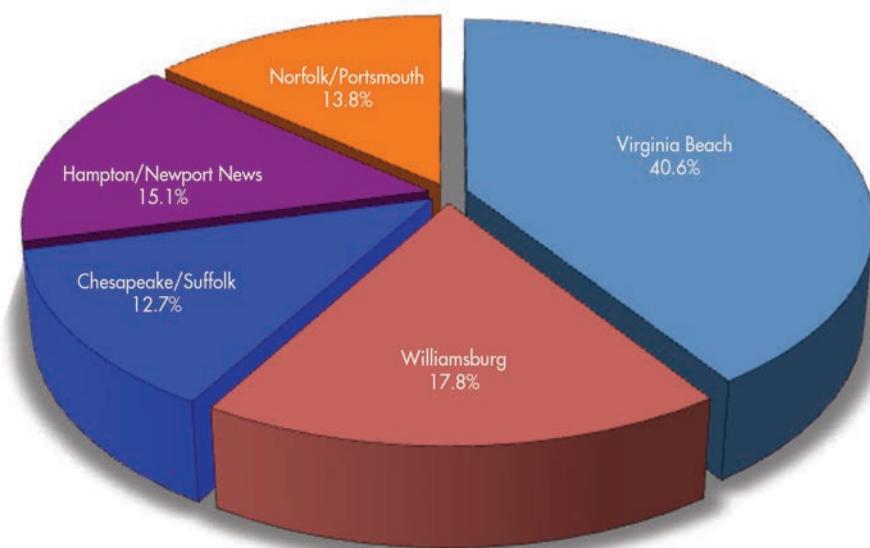
GRAPH 18

ESTIMATED CITY HOTEL MARKET SHARES IN HAMPTON ROADS AS INDICATED BY INDUSTRY REVENUES, 1999 AND 2012

1999



2012



Sources: Smith Travel Research Trend Reports Dec. 27, 2007, Dec. 23, 2009, and, Jan. 18, 2013, and the Old Dominion University Economic Forecasting Project

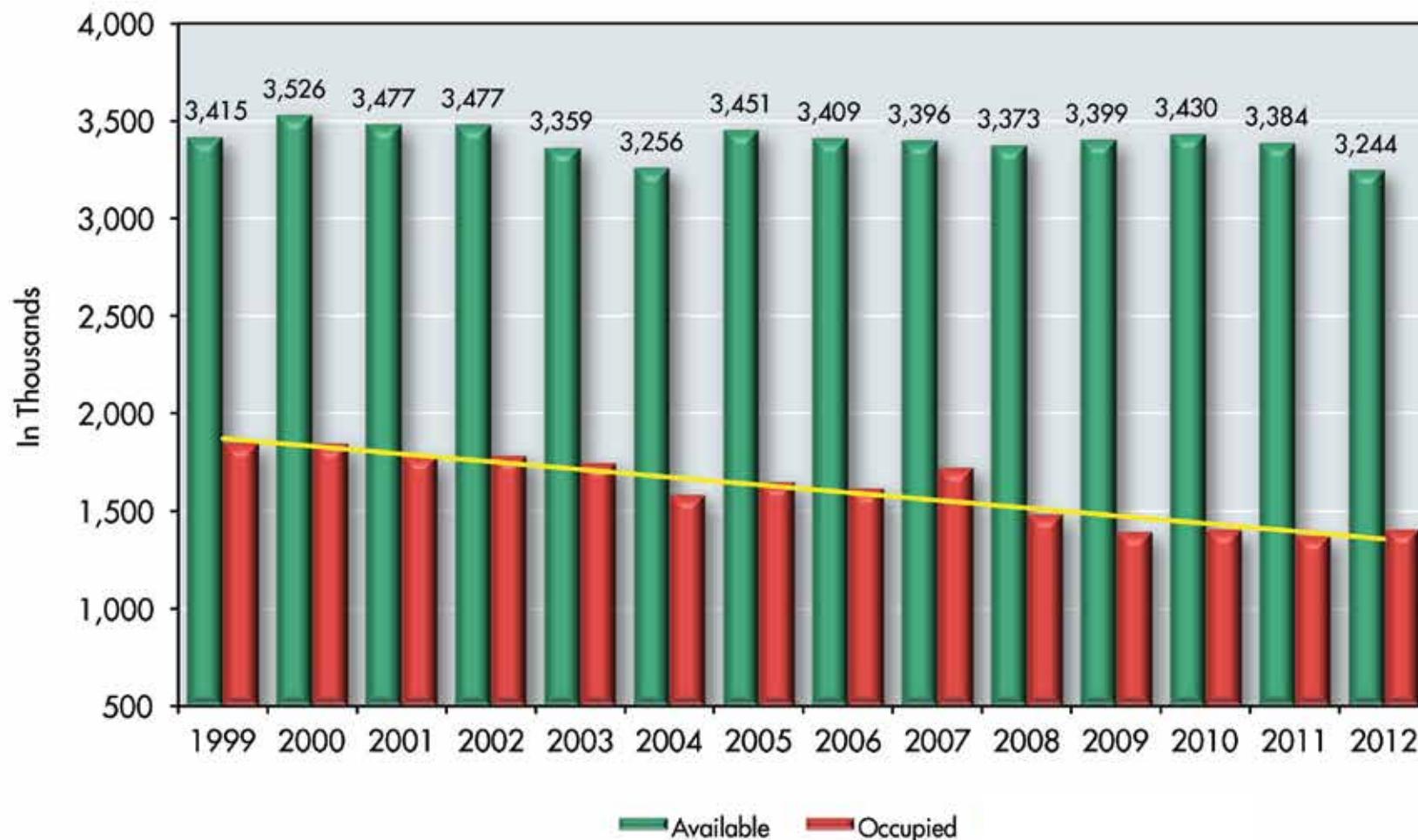
GRAPH 19
HOTEL ROOM NIGHTS IN CHESAPEAKE/SUFFOLK MARKET, 1999-2012



Sources: Smith Travel Research, Dec. 23, 2009, Jan. 18, 2013, and the Old Dominion University Economic Forecasting Project

GRAPH 20

HOTEL ROOM NIGHTS IN THE HISTORIC TRIANGLE (WILLIAMSBURG) MARKET, 1999-2012



Sources: Smith Travel Research, Dec. 27, 2007, Jan. 18, 2013, and the Old Dominion University Economic Forecasting Project. Williamsburg market includes city of Williamsburg, James City County, York County and Gloucester County.

Summing It Up

Yes, 2013 was not a great year, but it really could have been worse. We were able to vault over federal budget sequestration and achieve modestly respectable private-sector economic growth. Bright spots included the Port of Virginia and tourism in Virginia Beach. And, as we will see in the next chapter, the regional housing market has turned the corner and despite still hefty levels of distressed, bank-owned homes and homes being auctioned, is healthier than it has been for half a decade.



Our Housing Market Turns the Corner



OUR HOUSING MARKET TURNS THE CORNER

A

fter a very difficult half decade characterized by falling sales and prices, a surge in foreclosures and many underwater homeowners, it is now fair to say that residential housing markets in Hampton Roads are on the mend. While some significant economic challenges remain, both sales and prices are up, foreclosures are down and the proportion of underwater homeowners who owe more on their home than it is worth has declined.

Still, it was a difficult several years. As Graph 1 reports, the median (50th percentile) selling price of an existing home in Hampton Roads fell 24 percent between the third quarter of 2007 (our all-time peak) and the first quarter of 2013. True, this was less than the disastrous price reductions that occurred in locations such as California, Florida and Nevada. Even so, it was still slightly larger than the national median (22 percent from its peak in the third quarter of 2005 and the first quarter of 2013).

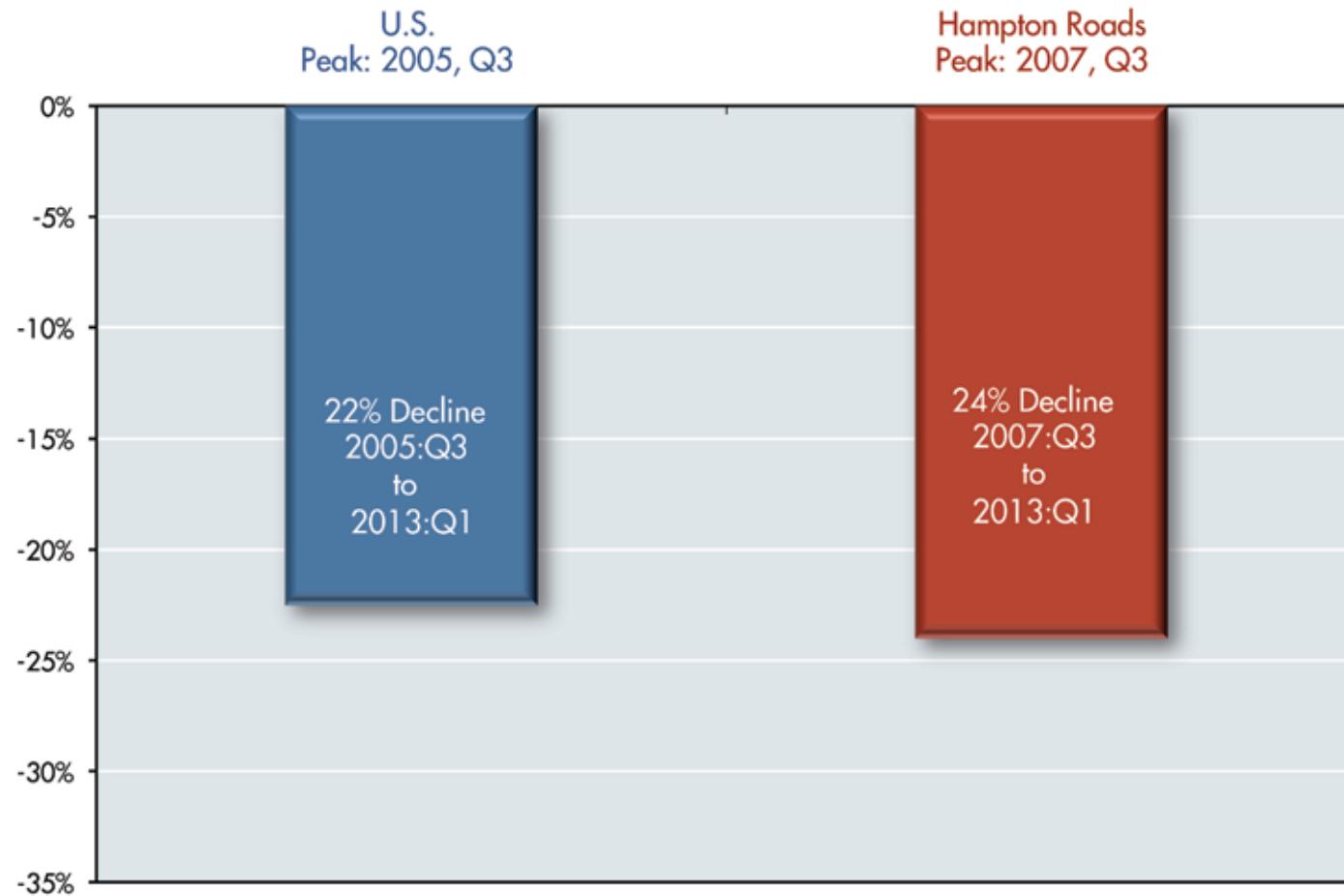
Table 1 illustrates the source of our housing market grief. The median sales price of existing homes in Hampton Roads fell every year between 2008 and 2011. This followed a 90 percent increase that occurred between 2002 and 2007, suggesting that a housing price bubble divorced from economic fundamentals had developed in our region. Finally, in 2012, median sales prices for existing homes began to increase, albeit by only 2.78 percent. We are on track for a 5.5 percent increase in 2013.

TABLE 1		
MEDIAN SALE PRICE OF EXISTING RESIDENTIAL HOMES IN HAMPTON ROADS: 2001-2013*		
Year	Median Price	Annual Percent Change
2001	\$109,000	9.1%
2002	\$116,900	7.3%
2003	\$130,000	11.2%
2004	\$156,500	20.4%
2005	\$192,000	22.7%
2006	\$214,900	11.9%
2007	\$223,000	90% Increase between 2002 and 2007
2008	\$219,000	-1.8%
2009	\$207,000	-5.5%
2010	\$203,900	-1.5%
2011	\$180,000	-11.7%
2012	\$185,000	+2.78%
2013*	\$182,000	+2.25%

Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project

*Data are from YTD May 2013 and YTD May 2012.

GRAPH 1
**CUMULATIVE DECLINE IN MEDIAN SINGLE-FAMILY HOUSE PRICES FROM PEAK PRICES FOR EXISTING HOMES
(EXCLUDING CONDOMINIUMS), IN HAMPTON ROADS**



Sources: National Association of Realtors, Real Estate Information Network and the Old Dominion University Economic Forecasting Project

Housing Inventory And Time On Market

For some time, Hampton Roads has experienced what one real estate agent refers to as "a substantial overhang of unsold homes" that has stifled the market. Fortunately, this appears to be changing. One can see in Graph 2 that our estimates of unsold existing residential homes on the market underline a significant decline in unsold housing inventory. We estimate that 9,375 unsold existing residential homes are on the market now in Hampton Roads, down from a peak of 13,333 in 2010. It's worth noting, however, that these numbers fluctuate throughout the year and are the highest during the summer.

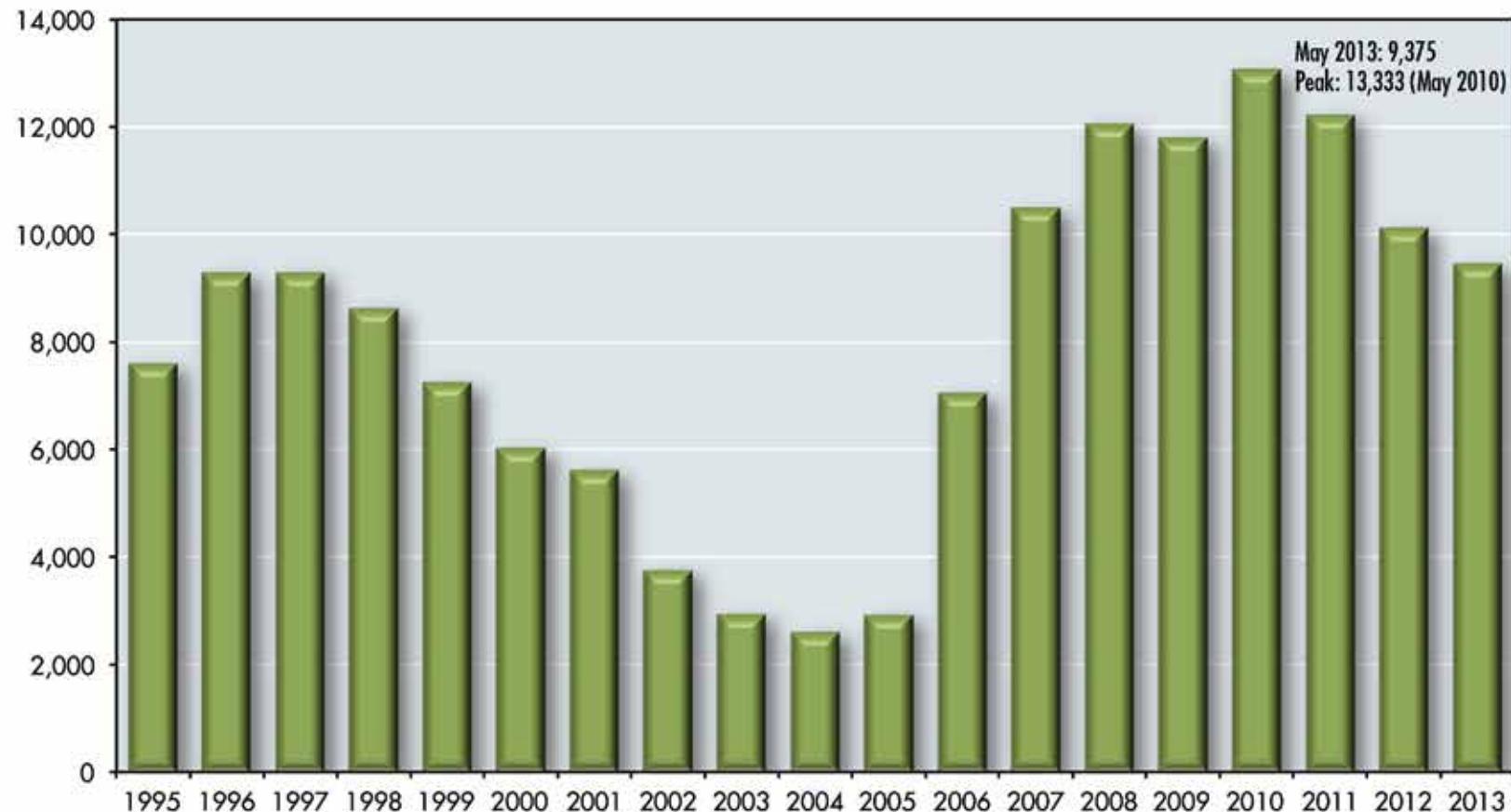
Further good news is evident in Graph 3, which charts both the number of existing residential homes sold in Hampton Roads since the turn of the century and the average number of days those homes were on the market prior to their sale. Sales are trending modestly upward and there is a modest downward trend in the average number of days each home is on the market until sale.

How much housing inventory is available in Hampton Roads today and ready for sale? A good way to obtain a feel for this is to compute the average number of months of supply of existing homes. This tells how long it would take to eliminate the existing inventory of unsold homes at current sales rates. Graph 4 discloses that we had an average of 5.56 months of supply of unsold existing homes for sale between 1996 and 2013. Currently, we have 6.48 months of unsold homes for sale, but this is down from the previous high of 10.24 months in November 2010.



GRAPH 2

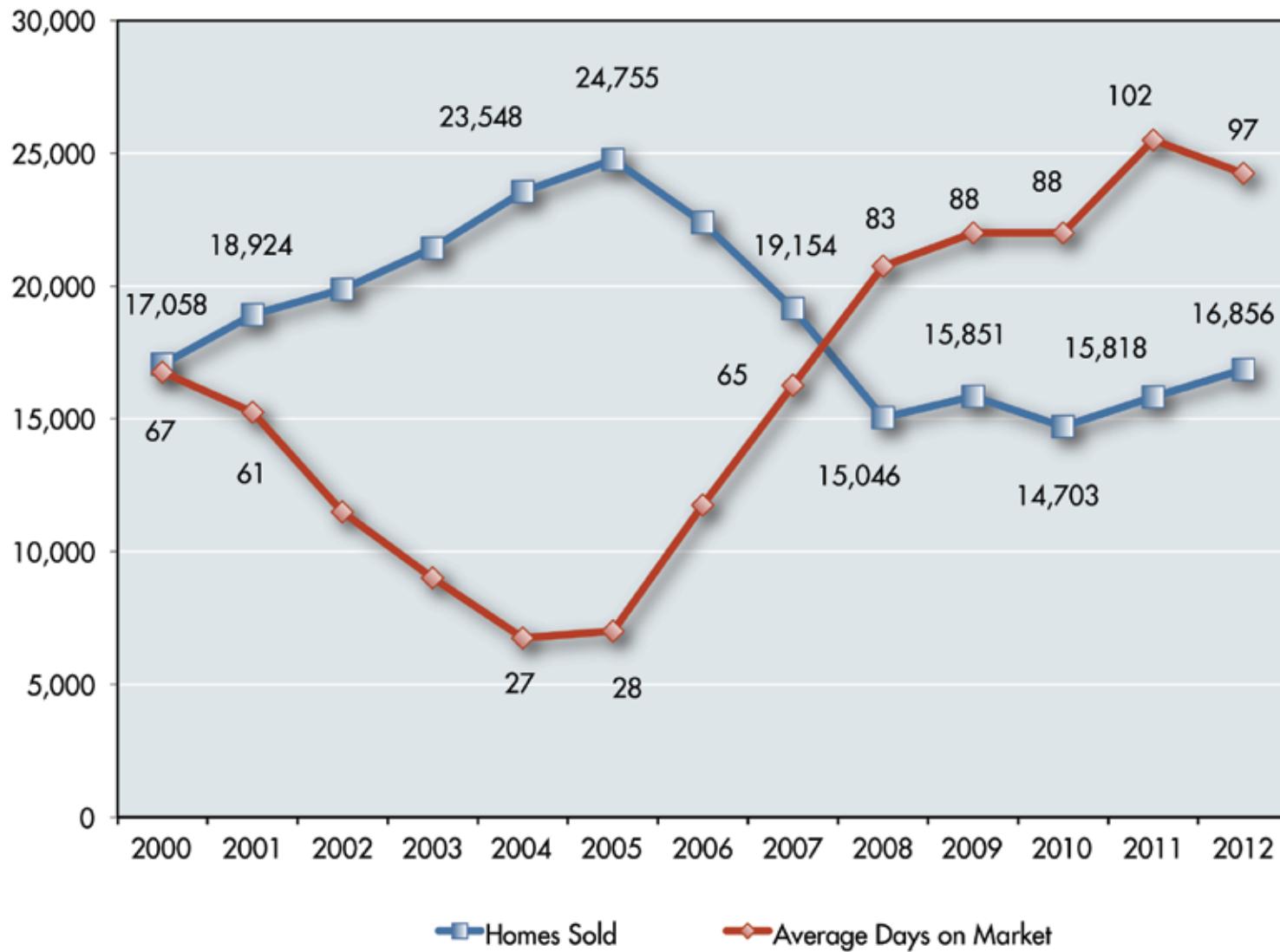
ESTIMATED INVENTORY OF EXISTING RESIDENTIAL HOMES AS MEASURED BY ACTIVE LISTINGS ON MAY 31 OF EACH YEAR



Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project

GRAPH 3

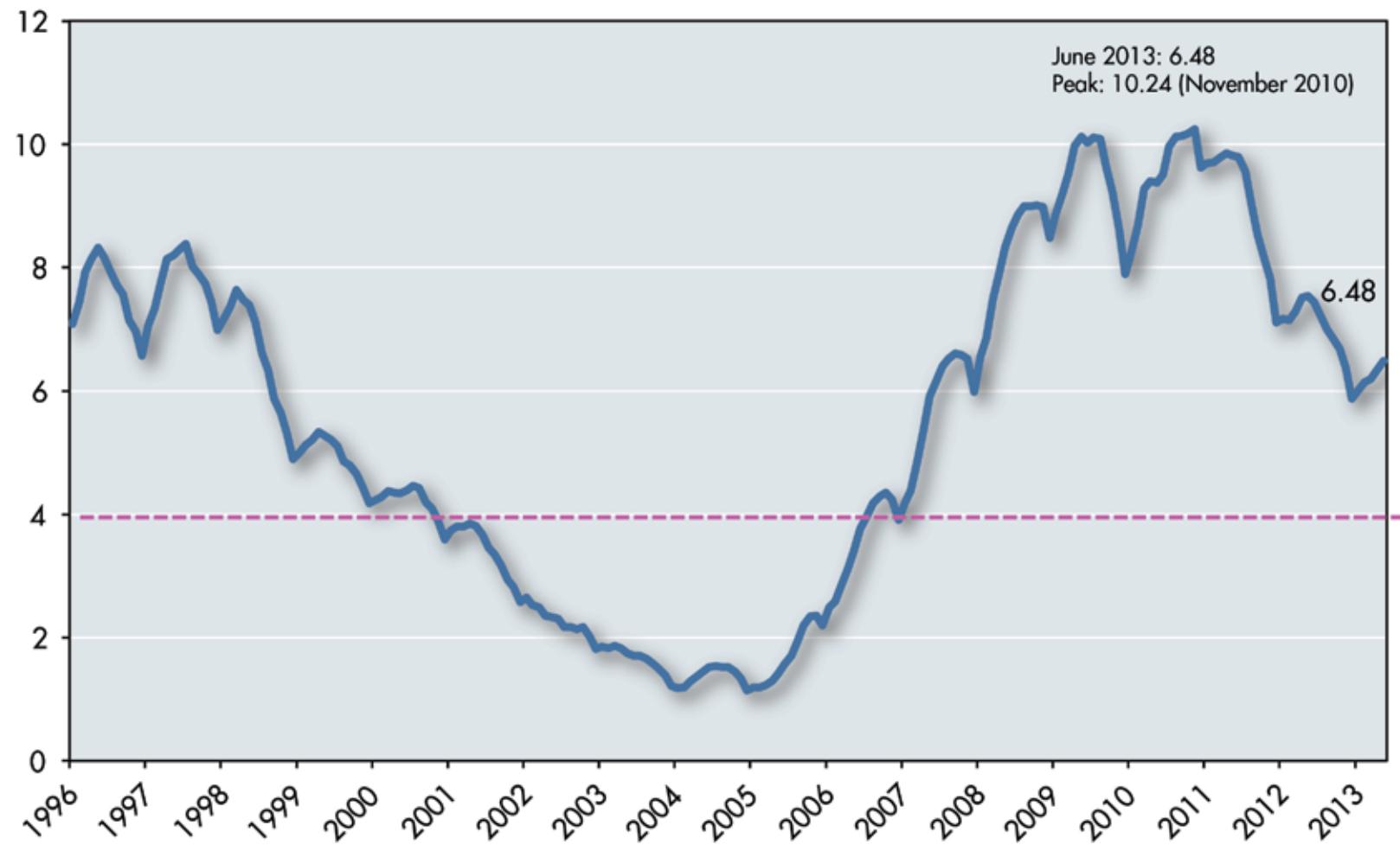
EXISTING RESIDENTIAL HOMES SOLD AND AVERAGE DAYS ON THE MARKET IN HAMPTON ROADS, 2000-2012



Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project

GRAPH 4

ESTIMATED MONTHS OF SUPPLY OF EXISTING HOMES IN HAMPTON ROADS, JANUARY 1996 – MAY 2013



Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project (based on average number of sales in preceding 12 months)

Distressed Homes And Foreclosures

Distressed home sales are those that involve: (1) the sale of REO (real estate owned) homes that have been acquired by banks, often via foreclosure or abandonment; or (2) a "short sale" of a home for which an owner no longer has the ability or desire to service the mortgage, and the home then is sold at best possible price. Distressed sales push down prices for several reasons. The owners of distressed homes are anxious to get rid of them and buyers know this. But it's also true that some distressed homes deteriorate in value because of lack of maintenance, or outright misuse.

Financial institutions understand that short sales of homes still occupied by individuals no longer able to pay their mortgage tend to diminish the probability of extensive property damage, at least when compared to foreclosures that have been preceded by an eviction. Consequently, short sales usually result in higher prices being paid for the homes in question. Knowledge of this has pushed many financial institutions to prefer short sales to sales preceded by foreclosures.

The depressing effect of distressed home sales on home prices can be seen in Table 2, which supplies home sales price information for Hampton Roads for 2006 through 2013, and then compares the sales prices of non-distressed homes with those that were sold as a distressed sale. In 2011, for example, short sales of distressed homes resulted in average sales prices that were 90.1 percent of the average non-distressed home sales price, while bank-owned REO average prices (usually the result of a foreclosure) were only 57.3 percent of the average non-distressed sales price.

The market dynamics associated with distressed housing sales are simple: Why buy a "regular," non-distressed home at full price if you can purchase a distressed home at a huge discount? Thus, a decline in the volume of distressed sales is a sign of a stabilizing home market. Happily, this is now occurring in Hampton Roads. In March 2011, distressed sales peaked in number at 618, but fell to 401 by June 2013 (see Graph 5). Further, as Graph 6 illustrates, the number of active listings of distressed homes has fallen noticeably as well.

What does the future hold? An important source of distressed homes inventory is the residential housing foreclosures that result in the departure of the owner. Graph 7 reveals that the number of foreclosures in Hampton Roads is down significantly from its 2010 high, although the 2012 number (8,267) is higher than the 2011 number (6,988). The increase in 2012 reflects a rather curious reality that actually depends upon the increasing health of our housing market. Financial institutions are not in the housing business and hence are reluctant to foreclose on homes that they believe will be difficult or impossible for them

TABLE 2

AVERAGE PRICE OF EXISTING SHORT SALE, REOS AND NON-DISTRESSED RESIDENTIAL HOMES SOLD IN HAMPTON ROADS, JANUARY 2006 - MAY 2013

Year	Non-distressed Sales	Short Sales	Short Sale Price Percentage of Non-distressed Price	Bank-owned REO Sales	REO Price Percentage of Non-distressed Price
2006	\$250,254	\$241,666	96.7	\$120,817	48.3
2007	\$261,723	\$237,897	91.3	\$163,421	62.4
2008	\$255,852	\$239,110	95.0	\$184,462	72.1
2009	\$243,902	\$239,913	98.4	\$164,229	67.3
2010	\$251,572	\$231,211	91.9	\$151,612	60.3
2011	\$236,358	\$212,967	90.1	\$135,304	57.3
2012	\$237,215	\$187,527	79.1	\$134,535	56.7
2013	\$241,025	\$180,249	74.8	\$131,285	54.5

Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project. Distressed homes are bank owned or short sale homes.

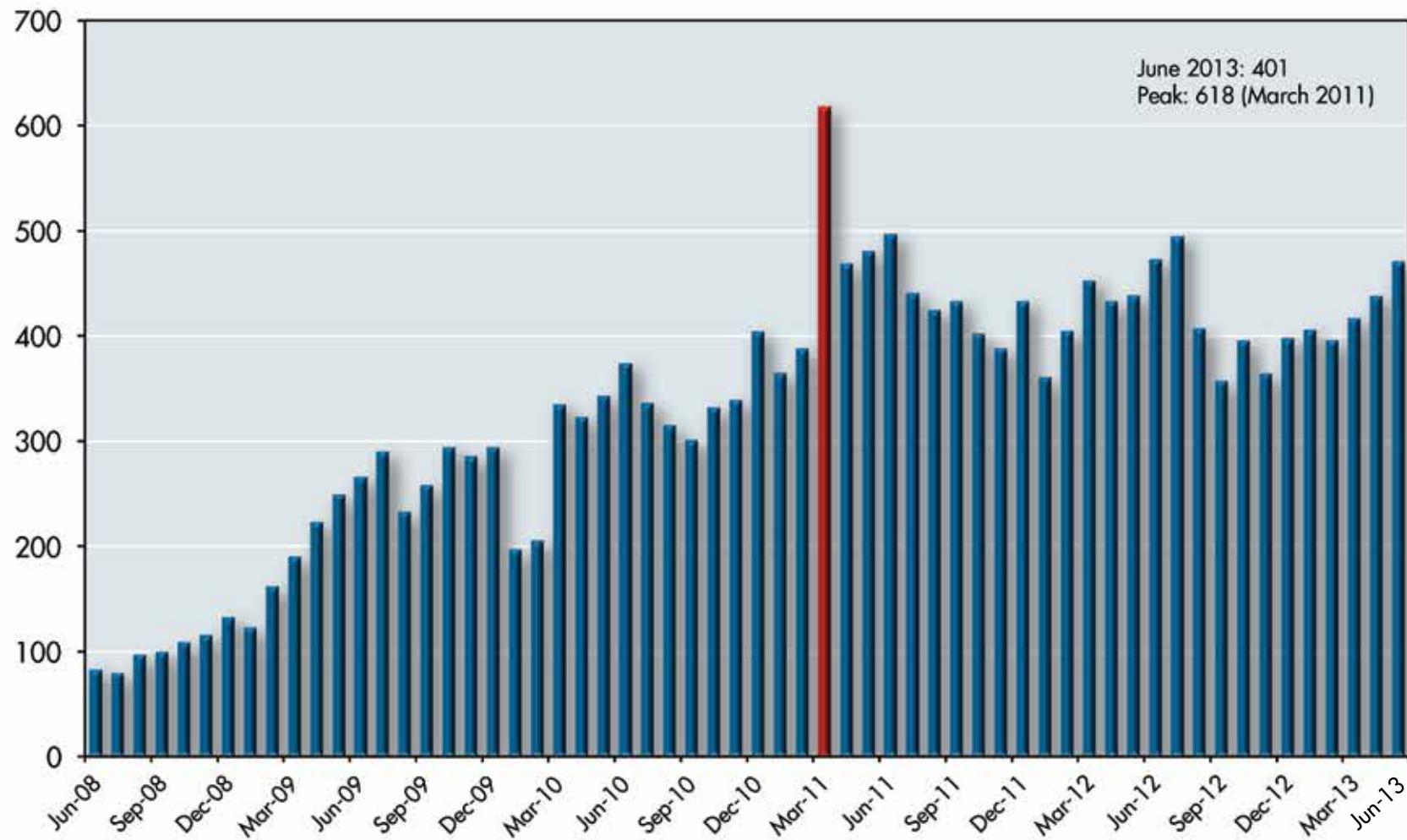
to sell. The improving health of our housing market has provided financial institutions with the confidence that they literally will be able to get rid of nonperforming mortgages on homes upon which they foreclose.

Nevertheless, sales of distressed homes still constitute a rather large proportion of total home sales in Hampton Roads. Graph 8 demonstrates this; in June 2013, more than 22 percent of all residential home sales in our region still were classified as distressed. This is down from the December 2012 peak of 29.12 percent, but is evidence that, even though our housing market is healing, it has not yet recovered.



GRAPH 5

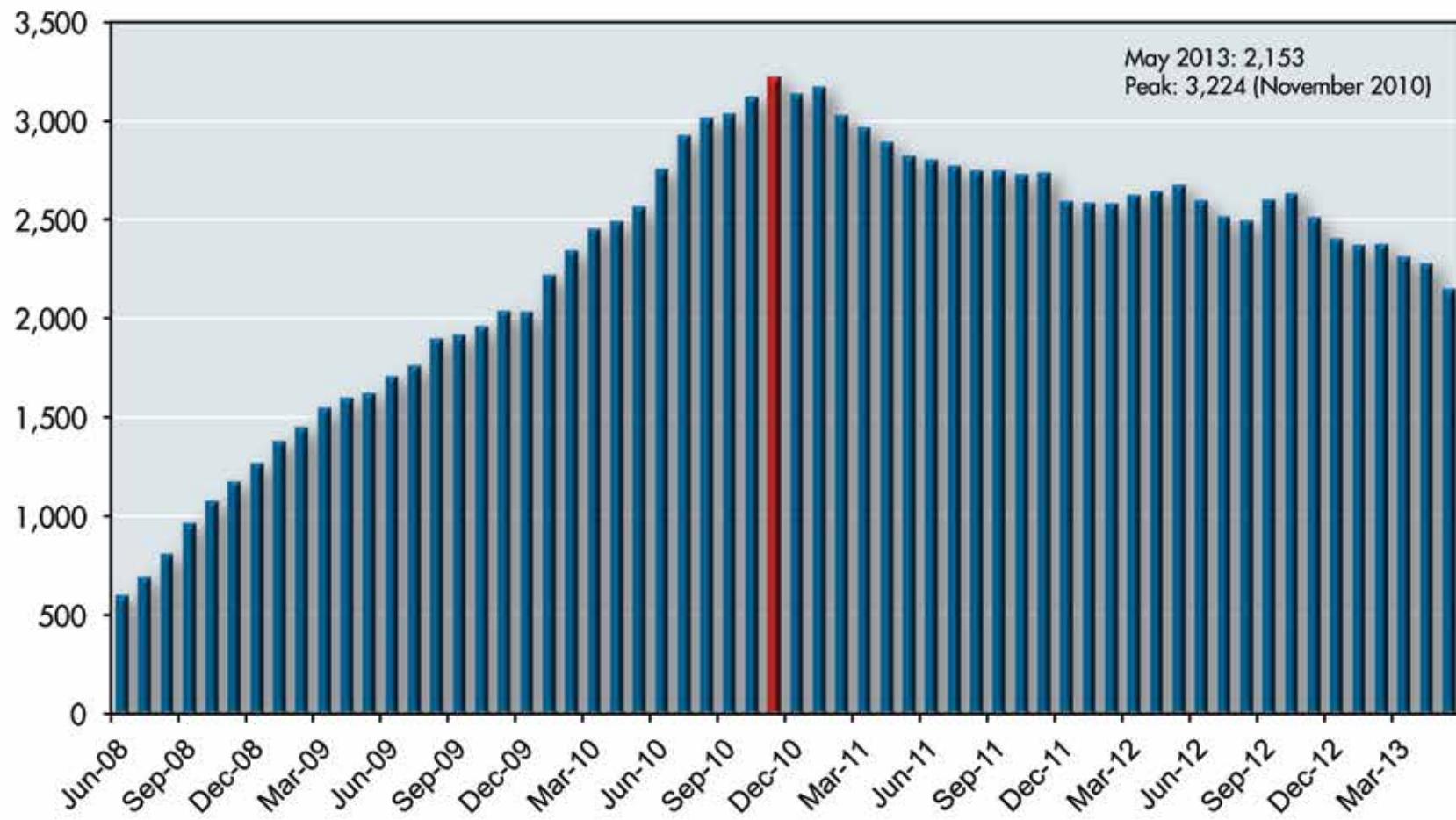
NUMBER OF DISTRESSED HOMES SOLD (REO AND SHORT SALES) IN HAMPTON ROADS, JUNE 2008 – JUNE 2013



Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project

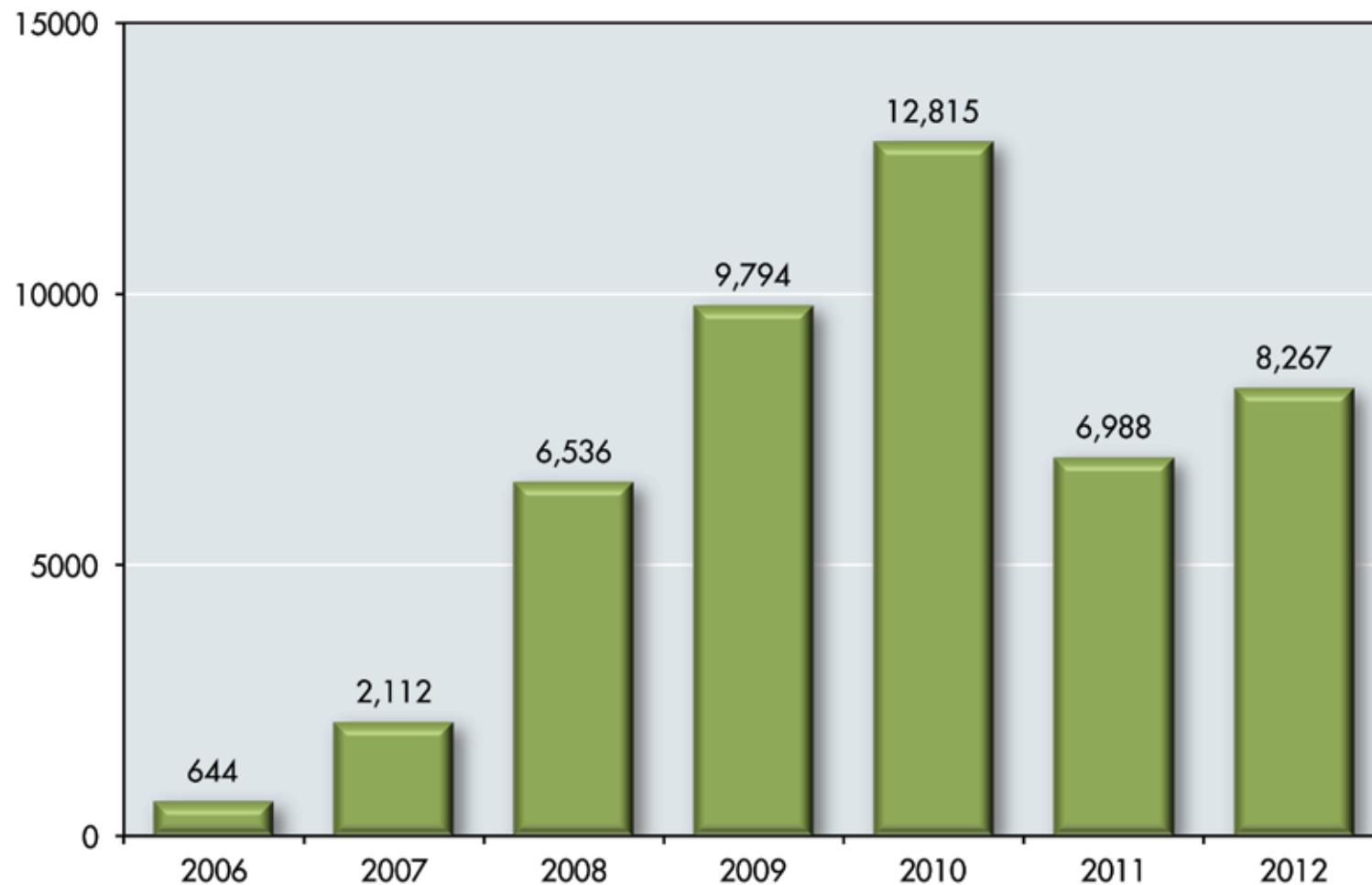
GRAPH 6

NUMBER OF ACTIVE LISTING OF DISTRESSED HOMES (REO AND SHORT SALES) IN HAMPTON ROADS, JUNE 2008 – MAY 2013



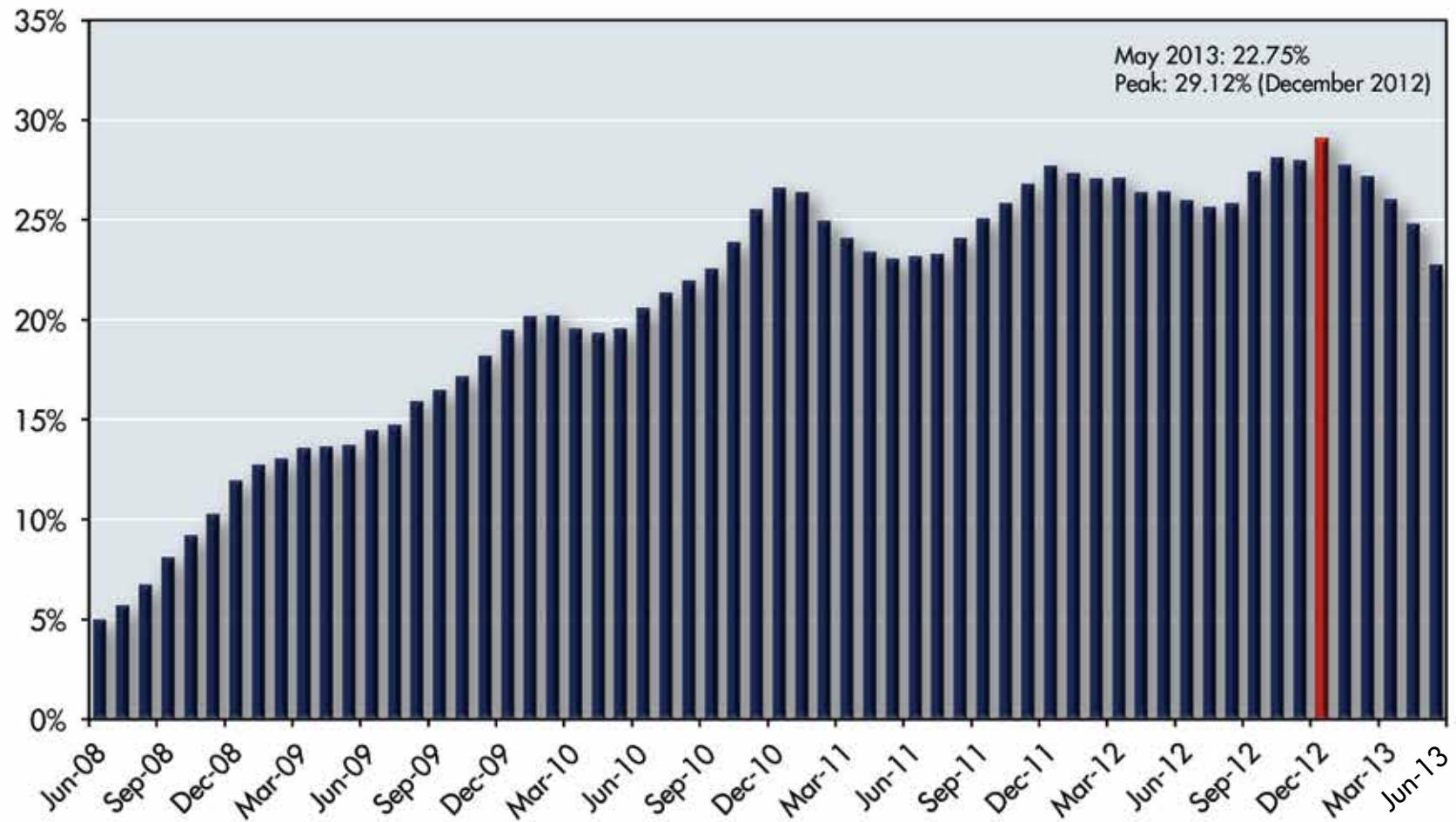
Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project

GRAPH 7
HAMPTON ROADS RESIDENTIAL FORECLOSURE FILINGS, 2006-2012



Sources: RealtyTrac and the Old Dominion University Economic Forecasting Project

GRAPH 8
SALE OF DISTRESSED HOMES (REO AND SHORT SALES)
AS A PERCENTAGE OF TOTAL EXISTING RESIDENTIAL HOMES SOLD IN HAMPTON ROADS



Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project

Housing Affordability

By historical standards, this is a very good time to buy a home in Hampton Roads. The major alternative, of course, is to rent a home rather than buy. Cost is an absolutely critical consideration. In Table 3, we compare the median monthly rent that must be paid to rent a three-bedroom apartment to the principal and interest payment that must be paid to service the mortgage on a median-priced home. The ratio of the rent to the mortgage payment is a measure of the relative attractiveness of each strategy.

It is apparent that home ownership has become increasingly attractive when compared to renting; the rent/mortgage payment ratio rose to 1.74 in 2013 after hitting a low of only .83 in 2006 and 2007. The numbers assume a no money down, historical average 30-year mortgage rate for each year and 3.8 percent in 2013.

Housing costs constitute one side of the housing affordability coin; the other side depends upon household income. The most commonly used measure of a household's ability to purchase a median-priced home is the ratio of median monthly household income to the average monthly payment a household would have to pay to own the home. Graph 9 makes those computations; one can see that in 2013, the average monthly payment for a new home was only 18.3 percent of median household income in Hampton Roads (and only 19.6 percent nationally). Both percentages are well below the 30 percent of income level that often is cited by financial advisers as the most that a household should pay for housing.

Households in our region currently have a much greater ability to purchase a home than they have had in nearly every year in the past. At the height of the housing boom in 2006, it took 30.6 percent of median monthly household income in Hampton Roads to make the monthly mortgage payment on the median-priced existing home. Of course, it's one thing to say homes are affordable and another thing to obtain financing. Mortgage standards have risen in recent years (probably a good thing) and not as many households qualify for financing today as did in the heydays of 2006 and 2007, when zero down payments were in vogue.

TABLE 3

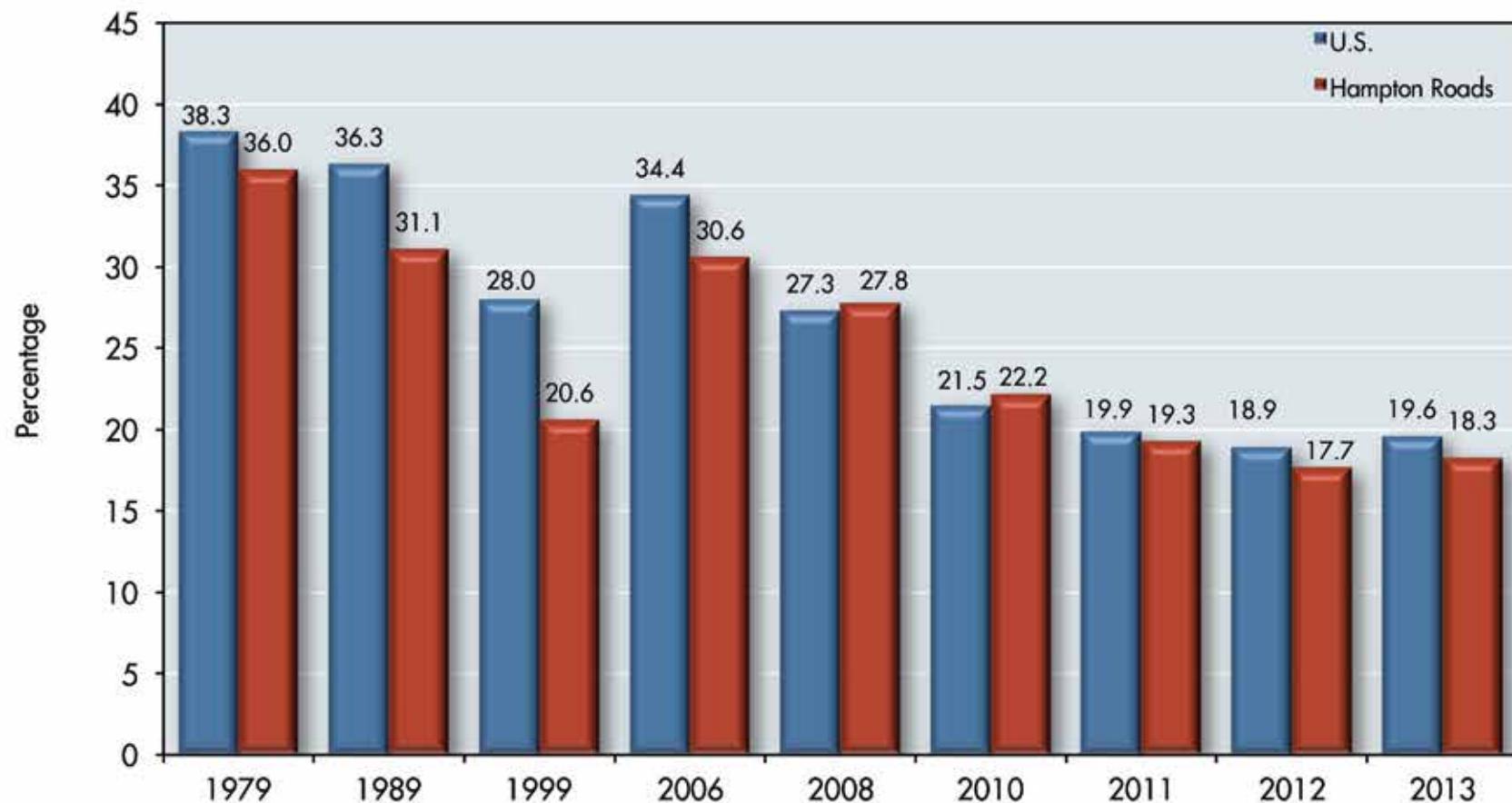
ESTIMATED HOUSE RENTAL AND PRINCIPAL AND INTEREST FOR A HOUSE PAYMENT IN HAMPTON ROADS, 2001-2013

Year	Median Monthly Rent for a Three-Bedroom House	P&I Monthly for a Median House	Ratio of Monthly P&I to Rent
2001	\$882	\$743	1.19
2002	\$911	\$761	1.20
2003	\$1,037	\$780	1.33
2004	\$1,044	\$940	1.11
2005	\$1,087	\$1,152	0.94
2006	\$1,118	\$1,353	0.83
2007	\$1,164	\$1,409	0.83
2008	\$1,247	\$1,323	0.94
2009	\$1,336	\$1,132	1.18
2010	\$1,382	\$1,062	1.30
2011	\$1,427	\$922	1.55
2012	\$1,454	\$859	1.69
2013	\$1,570	\$900	1.74

Sources: HUD and the Old Dominion University Economic Forecasting Project

GRAPH 9

**HOUSING AFFORDABILITY: MONTHLY PAYMENT FOR A MEDIAN-PRICE RESALE HOUSE AS A PERCENTAGE OF
MEDIAN HOUSEHOLD MONTHLY INCOME IN HAMPTON ROADS AND THE U.S., 1979-2013**



Source: Old Dominion University Economic Forecasting Project (assumes an average 30-year mortgage rate of 3.8 percent in 2013)

New Home Construction And Sales

It should not come as a surprise that the combination of home prices that still are 20 percent or more below their peaks in 2007 plus very high levels of housing affordability have resulted in increased home sales. One can see in Table 4 that both the sales of existing homes and newly constructed homes rose two years in a row in 2011 and 2012. The slow, but evident, recovery of new-home construction is a welcome sign that builders and developers now sense a changing economic climate. After eight consecutive years of declines in the number of newly constructed residential homes sold in Hampton Roads (see Table 5), more new homes now are being constructed and sold. While this improvement primarily is a reaction to our rallying regional economy, the revival of new residential home construction soon will become an economic engine on its own.

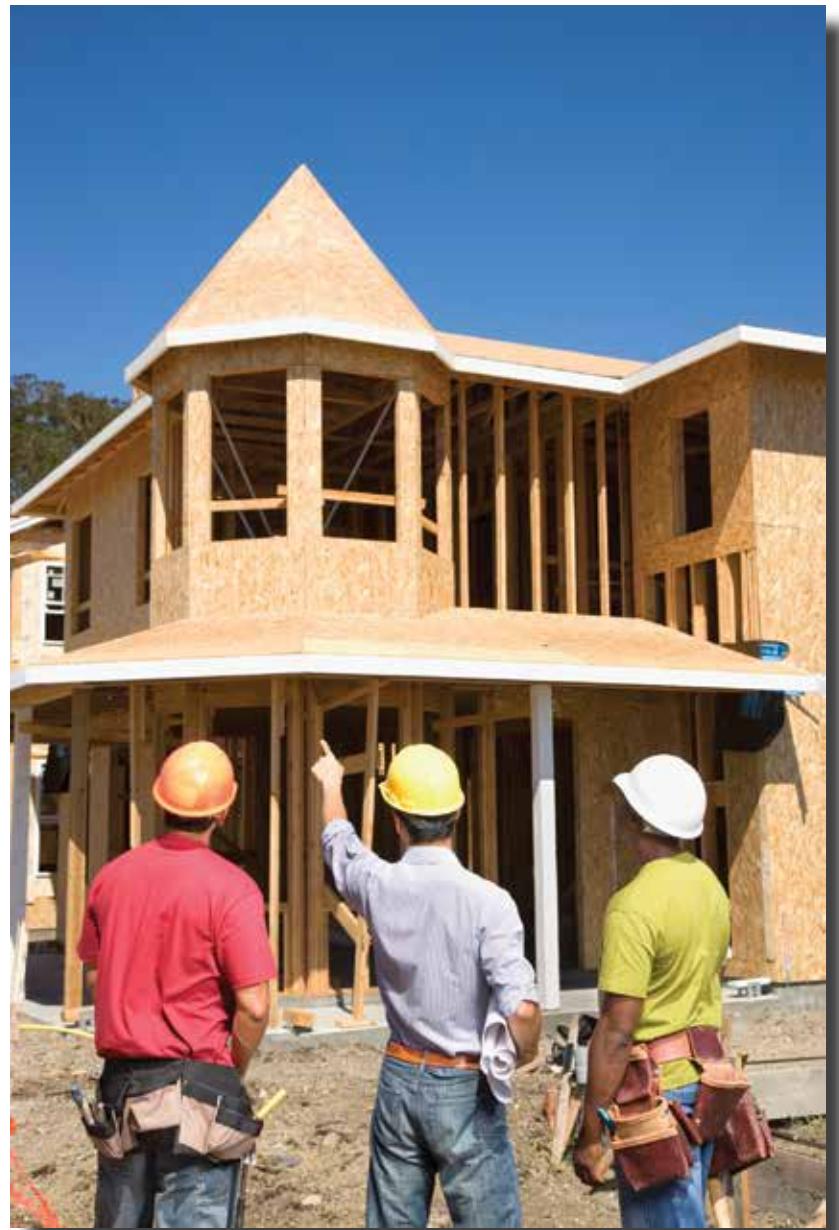


TABLE 4
**NUMBER OF EXISTING AND NEW-CONSTRUCTION HOMES
SOLD IN HAMPTON ROADS, 2001-2013***

Year	Existing Homes Sold	New-Construction Homes Sold	Percent New-Construction
2001	18,924	4,836	20.4%
2002	19,869	4,969	20.0%
2003	21,421	4,757	18.2%
2004	23,548	4,587	16.3%
2005	24,755	4,379	15.0%
2006	22,405	4,327	16.2%
2007	19,154	3,912	17.0%
2008	15,046	3,178	17.4%
2009	15,851	2,673	14.4%
2010	14,703	2,265	13.4%
2011	15,818	2,366	13.0%
2012	16,856	2,664	13.6%
2013*	7,160	1,059	12.9%

Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project. Data here represent those properties that are listed through Real Estate Information Network by REIN members and may not represent all new-construction activity in our region. *Data are for YTD May 2013.

TABLE 5
**NUMBER OF NEW-CONSTRUCTION RESIDENTIAL HOMES
SOLD IN HAMPTON ROADS, 2001-2012**

Year	Number Sold	Percent Change Year to Year
2001	4,836	18.1%
2002	4,969	2.8%
2003	4,757	-4.3%
2004	4,587	-3.6%
2005	4,379	-4.5%
2006	4,327	-1.2%
2007	3,912	-9.6%
2008	3,178	-18.8%
2009	2,673	-15.9%
2010	2,265	-15.3%
2011	2,366	4.5%
2012	2,664	12.6%

Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project. Data here represent those properties that are listed through Real Estate Information Network by REIN members and may not represent all new-construction activity in our region..

**54% Decrease
between 2002
and 2010**

Individual Housing Markets: A Breakdown By Cities

"Location, location, location" is the well-known observation of real estate professionals about what is most important in determining the value and salability of a home. Hampton Roads as a region boasts a wide array of cities and neighborhoods. Let's provide a bit of context to the regional housing data we supplied in the sections above by subdividing those data by city. Let's begin with sales prices (see Table 6).

Table 6 reveals that the median sales price of existing homes in Portsmouth fell substantially more than sales prices of existing homes in any other city in Hampton Roads between 2007 and 2012. This is unlikely to be good news for that city, but could simply represent a change in the mix of homes sold in Portsmouth (involving a higher proportion of lower-priced homes) rather than a catastrophic fall in the sale of all homes. Further, while Williamsburg recorded one of the smallest declines in prices (only 12.1 percent), that city's unemployment rate also is among the highest of any city in the region and we already have detailed the problems that the Historic Triangle is having in attracting tourists and hotel patrons. The housing market in Williamsburg, however, has benefited from a continued influx of retirees and other people who are attracted by the city's cultural and recreational amenities.

Table 7 reports analogous data, but focuses solely on newly constructed homes in each city between 2006 and 2012. This shakes up the previous relationship; Portsmouth no longer is the outlier and Virginia Beach now surges to the front in terms of the smallest decline in median sales price. Note that the decline in the median sales price of a newly constructed home between 2006 and 2012 (21.7 percent) was larger than the comparable decline in the median sales price of an existing home (17 percent). As is usually true, new-home construction took the brunt of the adjustment when housing markets deteriorated.

TABLE 6

MEDIAN SALES PRICE OF EXISTING RESIDENTIAL HOMES IN HAMPTON ROADS BY CITY, 2007 AND 2012

City	Median Price 2007	Median Price 2012	Percent Change
Chesapeake	\$250,100	\$217,900	-12.9%
Norfolk	\$195,000	\$145,000	-25.6%
Portsmouth	\$165,500	\$107,000	-35.4%
Suffolk**	\$257,500	\$199,000	-22.7%
Virginia Beach	\$245,000	\$219,000	-10.6%
Hampton	\$180,000	\$135,000	-25.0%
Newport News	\$199,250	\$145,800	-26.8%
Williamsburg*	\$284,450	\$250,000	-12.1%
Hampton Roads	\$223,000	\$185,000	-17.0%

Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project.

*Williamsburg represents Williamsburg, James City County, York County and Gloucester County.

**Median price in Suffolk peaked in 2006 at \$263,950.



TABLE 7
MEDIAN SALES PRICE OF NEW-CONSTRUCTION RESIDENTIAL HOMES IN HAMPTON ROADS BY CITY, 2006 AND 2012

City	Median Price 2006	Median Price 2012	Percent Change
Chesapeake	\$385,225	\$268,750	-30.2%
Norfolk	\$309,700	\$235,000	-24.1%
Portsmouth	\$287,015	\$208,775	-27.3%
Suffolk	\$368,500	\$268,900	-27.0%
Virginia Beach	\$380,725	\$355,300	-6.7%
Hampton	\$325,000	\$259,450	-20.2%
Newport News**	\$292,733	\$233,293	-20.3%
Williamsburg*	\$345,138	\$266,298	-22.8%
Hampton Roads	\$349,900	\$273,950	-21.7%

Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project

*Williamsburg represents Williamsburg, James City County, York County and Gloucester County.

**Median price in Newport News and Williamsburg markets peaked in 2005 and 2007 at \$315,900 and \$368,900, respectively.

Final Observations

The Great Recession pulverized regional housing markets. "It was the worst I had seen in 30 years," commented a shell-shocked real estate agent. Things have improved significantly since then. Prices and sales are up, inventories are down and the volume of distressed homes that flooded the market just a few years ago has declined.

Nevertheless, approximately one-quarter of all home sales in our region still involve distressed properties. We continue to be tied at the billfold both to the absolute volume of defense spending and its particular mix. We've largely avoided significant hurricane damage in recent years; however, rising sea levels render us increasingly vulnerable to very high levels of property damage and reductions in economic activity.

Finally, as always has been the case, civilians in Hampton Roads have very little ability to influence events in potentially explosive locations such as North Korea, the East China Sea, Syria and Iran. Adverse developments in such locations may represent bad news for the world and for the United States, but might represent good economic news for Hampton Roads if they result in a surge of additional military expenditures similar to those that occurred after 2001. Ironically, bad news for the world and the U.S. may represent good news for us, and vice versa. Such is the interesting nature of our economy and our housing markets.

Coal: A Very Important Economic Engine in Hampton Roads



COAL: A VERY IMPORTANT ECONOMIC ENGINE IN HAMPTON ROADS

Coal. The word conjures many quick visual associations – coal mining throughout the United States, but especially in southwestern Virginia; the most important worldwide source of energy for the production of electricity; smoke stacks and the possibility of environmental degradation; and, the huge coal terminals in our own backyard.

The coal terminals located in the Port of Virginia, here in Hampton Roads, are our focus in this chapter. How busy are they? How much income and how many jobs in our region are connected to their operation? What is their future?

Two Old Dominion University economists, Vinod Agarwal and Gary Wagner, recently analyzed the economic impact on Hampton Roads and Virginia of coal exports via the Port of Virginia. This chapter relies heavily upon their work, which was performed at the request of CSX Transportation, Dominion Terminal Associates and Kinder Morgan.

Some Background

Hampton Roads is the largest coal port in the United States and one of the largest in the world. There are three coal terminals in our region: the Lambert's Point coal terminal in Norfolk (owned and operated by Norfolk Southern Corp.), the Pier IX coal terminal in Newport News (owned and operated by Kinder Morgan) and the Dominion Terminal Associates coal terminal in Newport News. Coal is delivered by rail to these three terminals. CSX Transportation provides service to the terminals in Newport News, while Norfolk Southern provides the transportation to its own Lambert's Point facility in Norfolk.

Nearly 800 coal vessels made calls at our three terminals in 2011 and they transported more than 47 million metric tons of coal to other locations. Each of these vessels required an extensive range of auxiliary services that were

provided by coal forwarders and agents, testing labs, samplers, surveyors, tug services and harbor pilots. However, the impact of coal doesn't stop there. Many other businesses are linked to these coal shipments directly and indirectly, and the economic ripple effect of the coal shipments (as we shall see) is substantial.

Despite the growth in other sources of energy over the past few decades, coal remains one of the primary energy sources in the United States and worldwide. In the U.S., in 2011, far more electricity was generated from coal than the next

TABLE 1
TOP EXPORTERS OF COAL WORLDWIDE, 2011
(MILLIONS OF METRIC TONS)

Country	Total Exports	Steam Coal	Metallurgical Coal
Indonesia	309	309	0
Australia	284	144	140
Russia	124	110	14
United States	97	34	63
Colombia	75	75	0
South Africa	72	72	0
Kazakhstan	34	33	1

Source: "Coal Facts 2012," World Coal Association, www.worldcoal.org

highest (though very rapidly growing) source, natural gas (see Graph 1). Coal fueled more than 40 percent of the world's electricity production and more than 30 percent of total energy production in 2011 ("Coal Facts 2012," World Coal Association).

The United States and Hampton Roads in particular play a vital role in supplying coal for the production of both energy and steel here and abroad. As Table 1 reveals, the U.S. was the fourth-largest overall exporter of coal in the world in 2011 and the second-largest exporter of metallurgical coal (often labeled "met" or "coking" coal).

Hampton Roads has been, and continues to be, the single most important coal exporting port in the nation. Coal exporting market shares for the largest six participating regions over the past decade are presented in Table 2. One can see that Hampton Roads has accounted for nearly 40 percent of the total volume of U.S. coal exports since 2000. Our region's three coal export facilities – Lambert's Point (or Pier 6) in Norfolk and Pier IX and Dominion Terminal Associates in Newport News – collectively have never accounted for less than one-third of our nation's coal exports since 2000. In 2009, the three facilities exported slightly more than 51 percent of the total volume of U.S. coal exports. Until the Detroit area witnessed a considerable jump in its exports between 2005 and 2008, the volume of coal exports from Hampton Roads regularly exceeded the combined volumes of the next five largest coal-exporting regions in the United States.

The total volume of coal exports in both the United States and Hampton Roads has increased at a reasonably steady pace over the past decade. At the end of 2011, exports were just shy of 98 million metric tons nationwide and 43 million metric tons in Hampton Roads, up respectively from 36 million metric tons and 13 million metric tons in 2002. Graph 2 shows coal exports for the U.S. and Hampton Roads since 2002 (but does not include coastwise coal shipments that go to other locations in the U.S., usually via barge).

If we include coastwise coal (which stays inside the U.S.) and examine the three Hampton Roads facilities individually, then we see a very similar trend to that of the nation over the past decade. These relationships are illustrated in Graph 3. Total coal shipments (coastwise plus exports) have risen substantially at Lambert's

TABLE 2
MARKET SHARES OF THE LARGEST U.S. COAL EXPORT REGIONS, 2000-2010

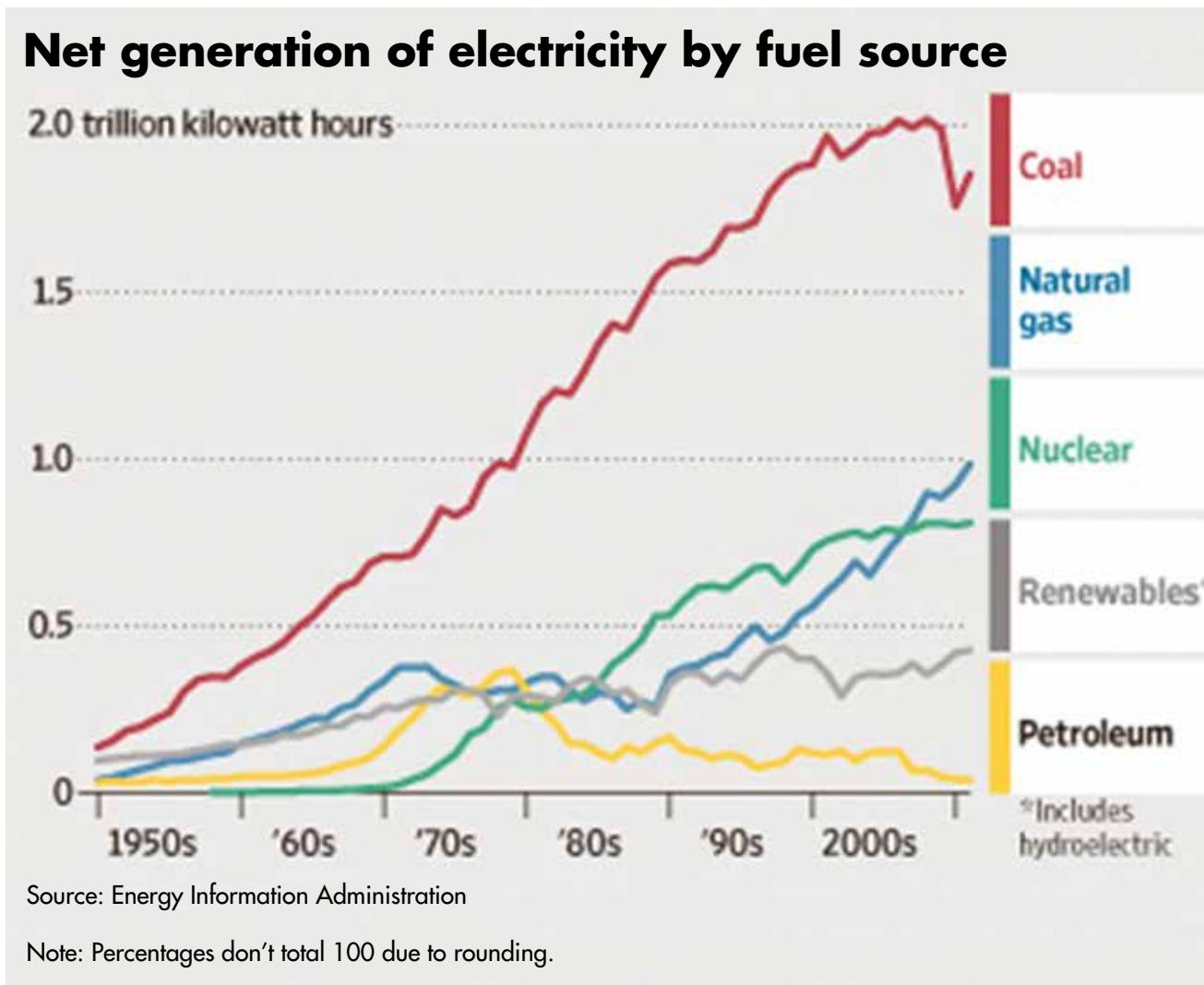
	Hampton Roads	Baltimore	Mobile	New Orleans	Detroit	Seattle
2000	41.5%	11.5%	11.4%	2.4%	2.3%	0.0%
2001	39.4%	10.7%	10.1%	2.9%	1.7%	0.0%
2002	33.8%	10.1%	11.2%	2.1%	1.2%	0.0%
2003	33.2%	7.9%	10.8%	3.0%	8.6%	0.0%
2004	33.2%	10.9%	14.9%	7.0%	14.5%	0.0%
2005	33.3%	11.1%	16.1%	4.1%	19.1%	0.0%
2006	33.3%	13.1%	13.8%	4.9%	30.4%	0.1%
2007	40.2%	14.7%	13.8%	7.3%	24.6%	0.0%
2008	40.1%	14.9%	11.2%	11.9%	22.5%	0.0%
2009	51.6%	12.5%	14.6%	9.0%	11.9%	0.7%
2010	43.2%	18.7%	13.1%	12.6%	8.6%	4.7%
Average 2000- 2010	38.4%	12.4%	12.8%	6.1%	13.2%	0.5%

Source: U.S. Energy Information Administration. Data do not include coastwise coal shipments that go to other locations in the U.S., usually via barge.

Point, Pier IX and Dominion Terminal Associates (DTA) since 2002. Total coal shipments increased from just over 20 million metric tons in 2002 to more than 47 million metric tons by 2011. In terms of growth over that period, total coal movements grew more than 106 percent at DTA, more than 114 percent at Lambert's Point and by 193 percent at Pier IX – all very impressive for a 10-year period. Coastwise coal, whose 7 million metric tons accounted for roughly 30 percent of the aggregate coal shipments through these facilities a decade ago, now accounts for only about 10 percent of shipments today. Hence, it is the export share of coal shipments that has been the growth component for coal movements in our region, especially since 2007.

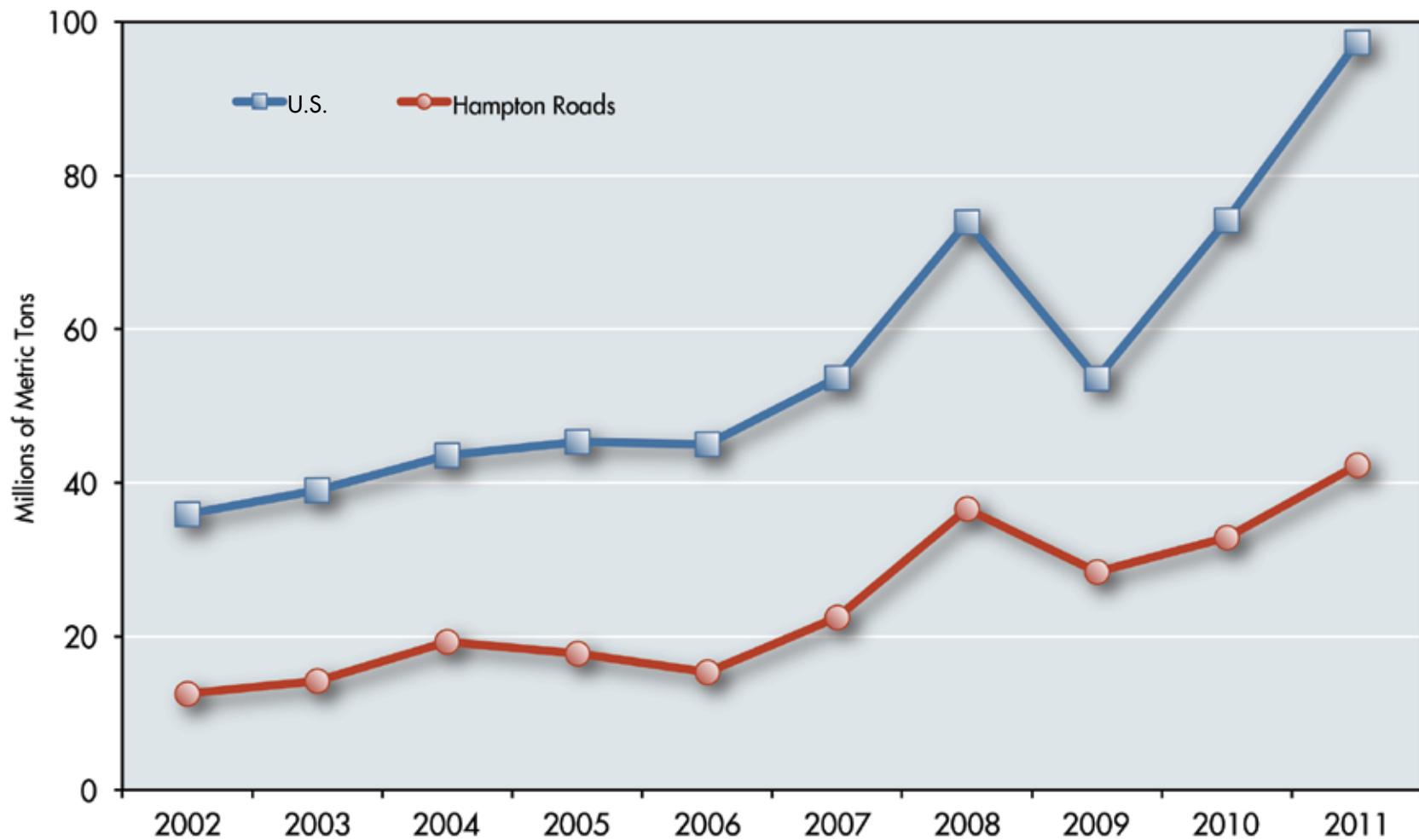
GRAPH 1

SOURCES OF ENERGY THAT HAVE SUPPORTED THE PRODUCTION OF ELECTRICITY
IN THE UNITED STATES, 1950-2012



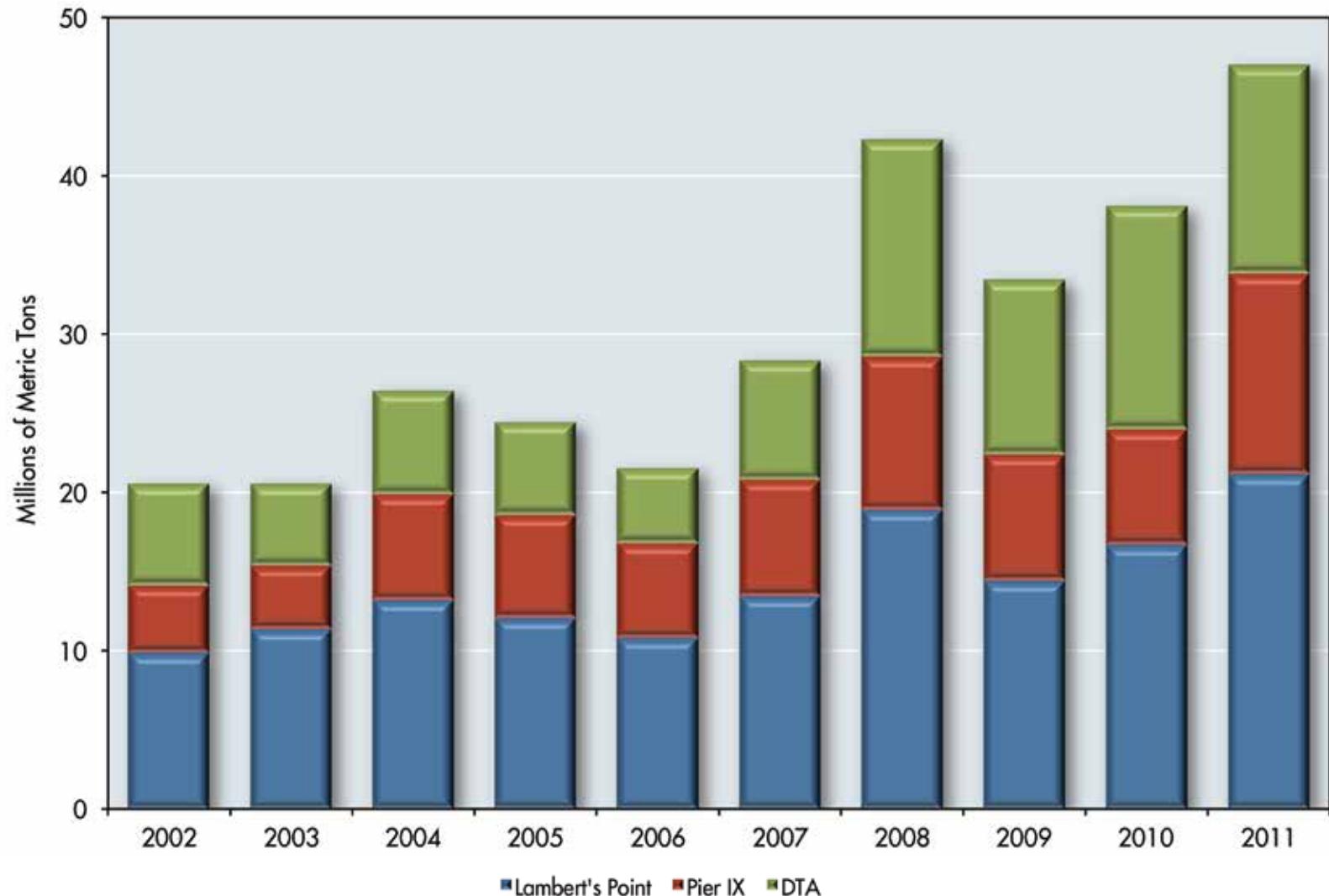
Source: Wall Street Journal, 259 (March 28, 2012), A1

GRAPH 2
TOTAL COAL EXPORTS FROM HAMPTON ROADS AND THE U.S., 2002-2011



Sources: U.S. Energy Information Administration and T. Parker Host. Data do not include coastwise coal that goes to other locations in the U.S., usually via barge.

GRAPH 3
TOTAL COAL SHIPMENTS FROM HAMPTON ROADS BY TERMINAL, 2002-2011



Source: T. Parker Host

It should be clear from Graph 3 that even though Lambert's Point is the largest coal terminal, each of the three facilities currently is shipping in excess of 12 million metric tons annually. Table 3 presents each terminal's share of coal shipments in Hampton Roads and the U.S. from 2002 to 2011.

During this period, Lambert's Point was responsible for nearly 48 percent of all coal shipments out of Hampton Roads. This constituted nearly 20 percent of all coal shipments in the U.S. over the same period. Further, coal shipments from Pier IX and DTA in Newport News grew from 7.3 percent and 10.9 percent, respectively, of all coal shipments nationwide in 2002 to more than 10 percent and 12 percent by the end of 2011.

In recent years, roughly three-quarters of the aggregate coal shipments through Lambert's Point, Dominion Terminal Associates and Pier IX have consisted of metallurgical coal, which is primarily used in the production of steel. Where were these customers located? As Graph 4 discloses, a third of the coal exports from Hampton Roads in 2011 was destined for just three countries – Italy, Brazil and the Netherlands. The 10 largest export destinations accounted for more than 70 percent of the total coal exports from our region. It is important to keep in mind that destinations with large port facilities, such as Rotterdam and Antwerp in the Netherlands, may simply act as way stations on the journey to the ultimate consuming nation.

The massive volume of coal moving through the facilities in Hampton Roads necessarily means that a steady stream of coal-laden vessels utilizes our regional waterways. Almost 800 vessels made calls either to Pier IX, Dominion Terminal Associates or Lambert's Point in 2011. Each of these vessels departed with an average tonnage of more than 45,500 metric tons of coal, and the largest vessel was loaded with more than 130,000 metric tons of coal! Table 4 reveals that the flow of coal from Hampton Roads was fairly steady throughout the year. Roughly two coal ships a day on average, 365 days a year, are loaded with coal in Hampton Roads and then sent around the world.

TABLE 3

SHARE OF SHIPMENTS OF THE THREE COAL TERMINALS IN HAMPTON ROADS, 2002-2011

	Share of All Coal Shipments in Hampton Roads			Share of All Coal Shipments in the United States		
	Lambert's Point	Pier IX	DTA	Lambert's Point	Pier IX	DTA
2002	47.9%	21.0%	31.1%	16.8%	7.3%	10.9%
2003	55.2%	19.7%	25.1%	20.1%	7.2%	9.2%
2004	50.0%	25.3%	24.8%	22.1%	11.2%	11.0%
2005	49.4%	26.6%	24.0%	19.3%	10.4%	9.4%
2006	50.3%	27.8%	21.9%	17.1%	9.5%	7.5%
2007	47.4%	26.1%	26.5%	19.9%	10.9%	11.1%
2008	44.7%	22.9%	32.4%	22.1%	11.3%	16.0%
2009	43.2%	23.8%	33.0%	22.8%	12.6%	17.5%
2010	43.8%	19.2%	37.0%	19.4%	8.5%	16.4%
2011	45.0%	27.0%	28.0%	19.5%	11.7%	12.2%
Average 2002- 2011	47.7%	23.9%	28.4%	19.9%	10.1%	12.1%

Sources: U.S. Energy Information Administration and T. Parker Host. Figures do not include coastwise coal, which goes to other locations in the U.S., usually via barge.

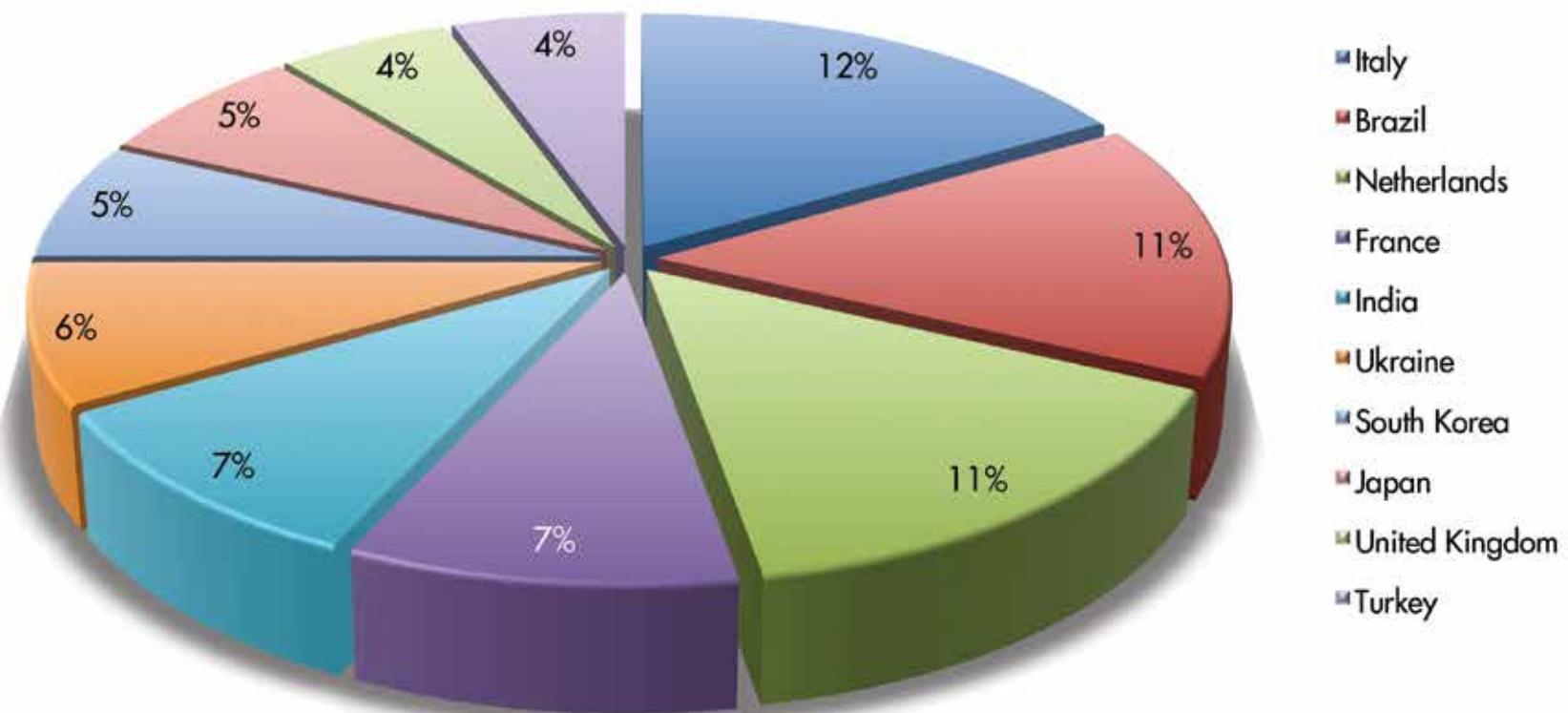
TABLE 4
**COAL VESSELS AND AVERAGE TONNAGE IN HAMPTON
ROADS, 2011**

Month	Number of Vessels	Average Metric Tons Per Vessel
January	76	42,751.7
February	65	49,227.2
March	85	47,893.3
April	79	51,968.7
May	67	48,495.1
June	49	42,236.4
July	52	50,936.0
August	57	49,662.5
September	65	45,192.9
October	59	51,021.4
November	64	48,060.6
December	57	55,249.4

Source: T. Parker Host



GRAPH 4
TOP 10 DESTINATIONS FOR COAL EXPORTS FROM HAMPTON ROADS, 2011



Source: T. Parker Host

Computing Coal's Economic Impact In Hampton Roads

The total economic impact of coal shipments on the Hampton Roads economy is the sum of the primary and secondary impacts. The primary economic impact is the direct impact on the economy resulting from an initial round of economic activity – output, earnings and employment that specifically result from all of the firms directly linked to coal shipments. How many employees do coal-related firms have and how much are they paid? How much do these firms spend on machinery, supplies, insurance, food, etc.? Most of this and similar information reported here was obtained via survey questionnaires and personal interviews conducted by ODU economists Agarwal and Wagner.

These direct economic expenditures create secondary economic effects that can be broken down further into indirect and induced impacts. Each of the coal terminals stimulates activity by businesses that supply it with a wide variety of items, ranging from fuel and machinery to food and legal services. Traditionally, this activity is labeled an indirect impact in economic impact studies.

The direct expenditures made by the coal terminals and the indirect expenditures made by suppliers ripple throughout the region and put more money into the pockets of people in many different occupations and locations. When they spend the increased money that appears in their paychecks, this creates induced economic impact.

Thus, the direct economic impact stimulates both the indirect and induced economic impacts. If \$1,000 of direct economic expenditures by the coal terminals generates \$300 in indirect economic impact and \$200 in induced economic impact, then the economic impact multiplier effect is $(\$1,000 +$

$\$300 + \$200)/\$1,000 = 1.5$. The size of the multiplier sometimes can be a subject of controversy. If, for example, most of the ripple effect occurs outside of the region being examined (a “leakage”), then the actual multiplier effect will necessarily be smaller. Or, if consumers refuse to spend the extra money when it appears in their paychecks, then the multiplier also will be smaller.

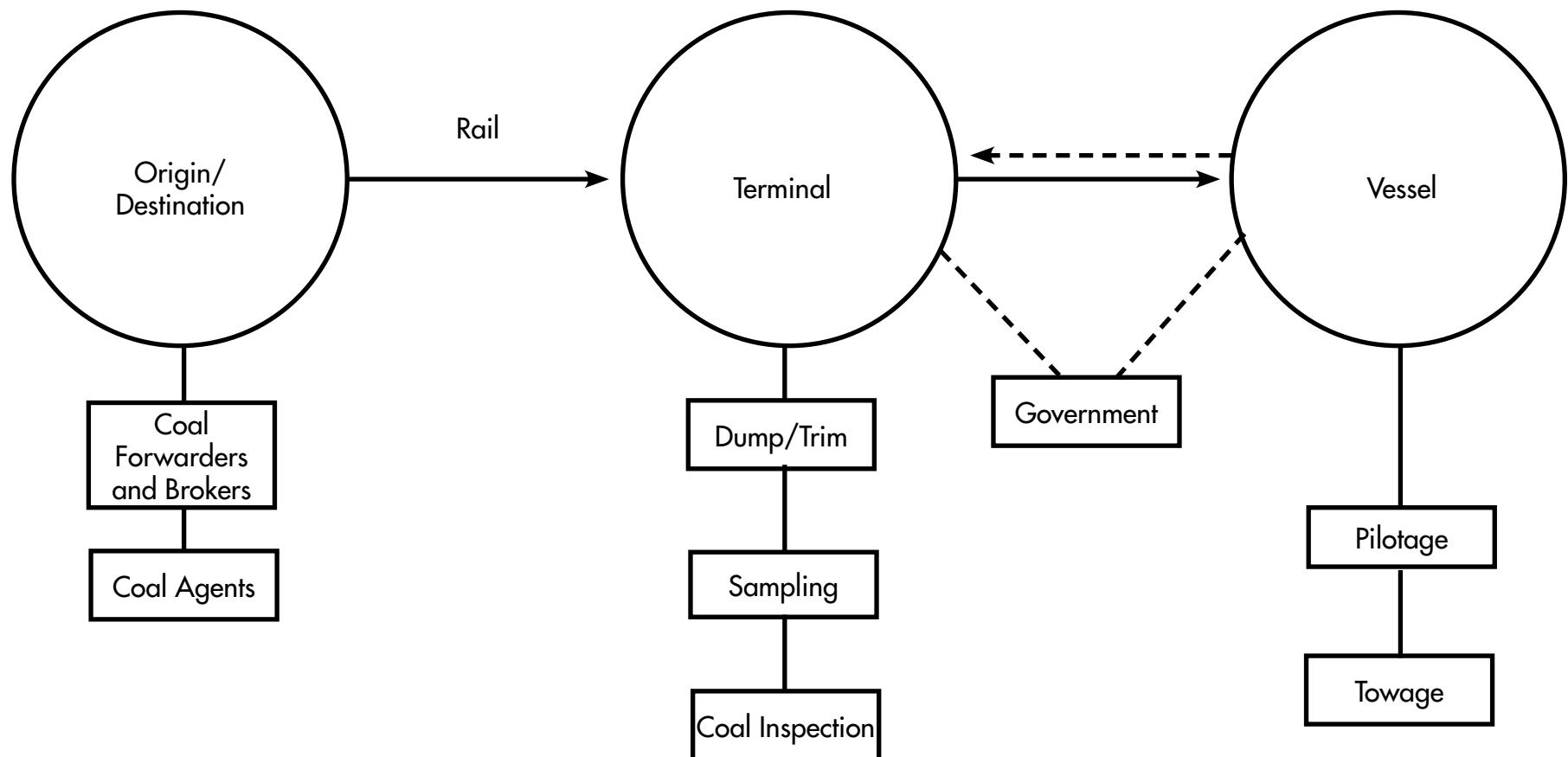
Readers who have followed the national debate over whether the U.S. government’s stimulus package actually worked will recognize the previous discussion. Those who seek to demonstrate that what they are doing is quite significant prefer large multipliers; those who wish to minimize that effect prefer smaller multipliers. In the case at hand, Agarwal and Wagner appropriately let the data provide them with the answer.

JOBS AND THE PAYROLL-GENERATING PROCESS

The movement of coal is dependent upon three general levels of services: transportation, terminal and vessel. As demonstrated in Graph 5, transportation services are provided by coal forwarders and brokers, by agents who arrange for the movement of coal and by railroads that actually transport coal to the terminals. Coal agents engage in activities such as coordinating and monitoring of shipments from mines to the terminal, as well as monitoring coal loadings at the terminals.

A vessel entering the Port of Virginia to pick up coal requires services that generate jobs and earnings. These services, among others, include pilotage, towing, fuel, supplies and repairs. Further, as coal reaches our port, terminal services begin to generate jobs and earnings. In this case, services are required for dumping, inspection, sampling and dockage. The U.S. government also provides services that include inspection of ships, Customs and Coast Guard services.

GRAPH 5
THE GENERATION OF JOBS AND PAYROLL WITH COAL SHIPMENTS



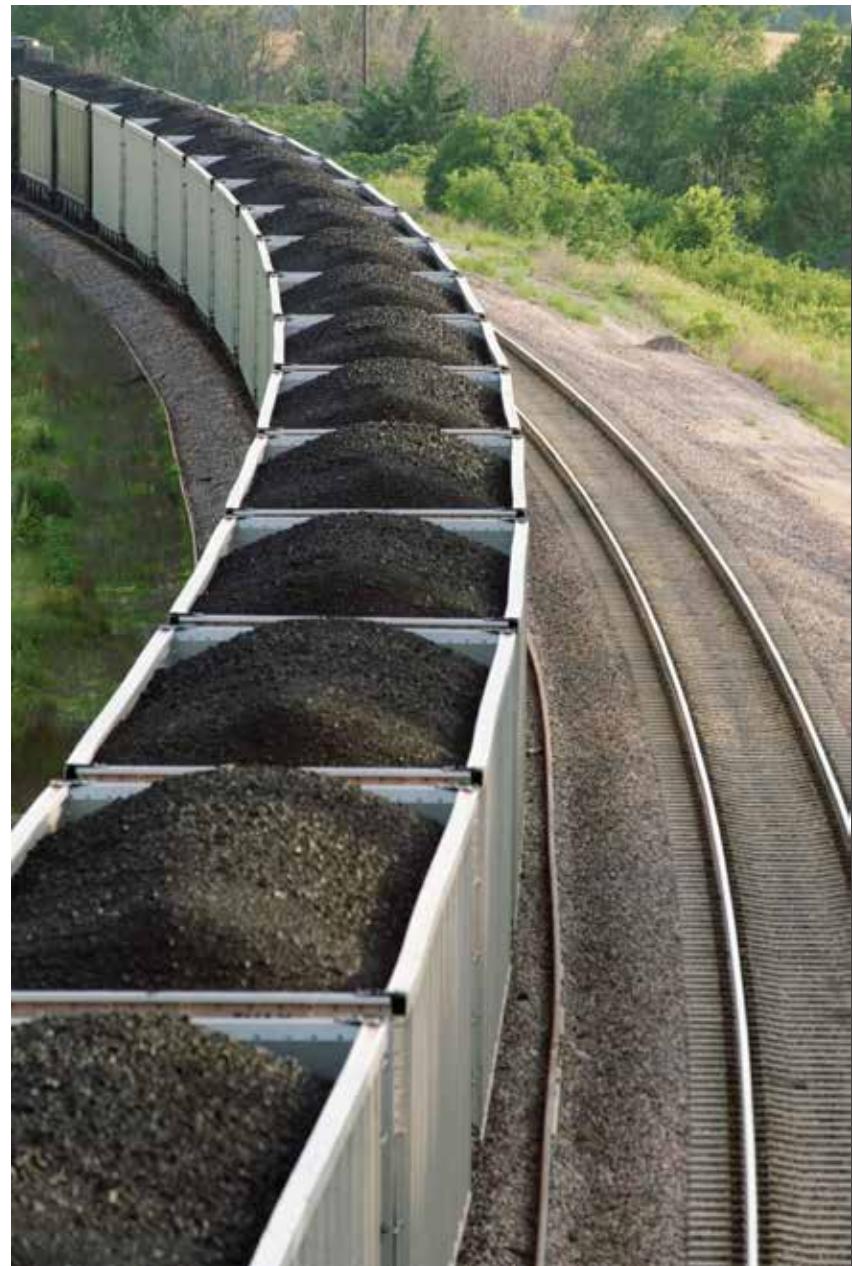
THE NATURE OF THE DATA

The primary data for this study were gathered in two stages. Coal terminals and the railroads involved in shipping coal provided detailed information on employment, payroll, benefits, capital expenditures, taxes and other expenditures. Firms that directly provide services to the railroads and the terminals were surveyed to gather information about their employment, payroll, taxes and their dependence on the coal terminals in Hampton Roads. Of the 17 firms identified, only one refused to respond; two firms stated that they are not affected by coal shipments. The remaining 14 firms returned the surveys with complete information on jobs and their degree of dependence on coal shipments. A few firms refused to provide information about their payroll and benefits, while many did not provide information on taxes. Missing information on payroll, benefits and taxes was estimated on the basis of completed surveys and other data sources.

It should be noted that this study assumed that the few companies that did not complete our survey or provide any information were treated as having zero jobs and dependence on coal shipments. In addition, since government agencies did not provide any information about their dependence on coal shipments, this study assumed there were no jobs that are directly dependent on coal movements. In other words, the information on the number of jobs and earnings used in this study represents conservative estimates.

The data revealed that coal terminals and railroads connected to coal shipments employed 947 people with a total payroll of \$45.4 million in 2011. When fringe benefits were included, that payroll increased to \$69.3 million. Other firms engaged in coal shipments had estimated employment of 142 people, with a direct payroll of \$9.8 million, and a payroll including fringe benefits of \$12.4 million. On average, a worker employed in an industry directly related to coal shipments received \$50,772 in wages and \$24,284 in benefits in 2011.

In addition, the coal terminals and railroads during the period 2007 to 2011, on average, spent \$31.8 million on capital improvements. These companies, on average, paid \$5.4 million in state and local taxes during that same period.



Direct, Indirect and Induced Impact Estimation and Results

Estimates of indirect and induced economic impacts in this report were generated by using the U.S. Department of Commerce's Regional Input-Output Model System II (RIMS II). The model is based on a national input-output table for 2010, which has been regionalized utilizing 2010 data. An input-output model shows mathematically how every industry is connected to every other industry. Such a model shows, for example, major relationships such as how much the steel industry depends on the coal industry, but also less obvious relationships such as how the coal industry affects the hotel and motel industry in Hampton Roads.

A useful way to think about the total economic impact of coal shipments is to visualize it as a wave approaching the shore. The wave may hit a breakwater that absorbs some of its momentum, but it will continue on to wash over the beach until all of its energy is exhausted. Likewise, coal shipments arriving in Hampton Roads flow through the region's economy, creating taxes, output, earnings and jobs. Though the initial energy of the economic activity is absorbed by leakages and taxes, the effect of the economic activity flow continues through the region's economy. Thus, industries that are directly involved with the local coal shipment industry pay employees, pay additional taxes and purchase goods and services from intermediate suppliers. Since some of the goods and services are "imported" from suppliers located outside of Hampton Roads, some of the economic energy leaks away and is incrementally dissipated.

However, many of the suppliers to the industries that are directly related to the coal business are located in Hampton Roads. Output, earnings and jobs are created in Hampton Roads within these *indirect* industries, which meet the demands of the directly related industries. A final burst of economic energy created by the flow of coal is expended by subsequent purchases from Hampton Roads industries, whose source is spending *induced* by the household earnings created in the direct and indirect industries.

The estimated direct, indirect, induced and total economic impact of coal shipments on Hampton Roads in 2011 is presented in Table 5. All estimates are

reported without sector or industry breakdowns to preserve the confidentiality of survey participants.

The direct economic impact of coal shipments in Hampton Roads (in 2011) was responsible for more than \$518 million of the region's economic output, more than \$55 million in earnings and nearly 1,100 jobs. Once we include the full ripple effects within our region, the economic footprint expands considerably. **Including the *indirect* and *induced* effects, in 2011 coal shipments in Hampton Roads generated more than \$900 million of goods and services for our region, created more than \$200 million in earnings across all private-sector industries and led to almost 4,200 jobs.**

In addition to the estimated impacts, the RIMS II model allows us to provide detailed estimates of the sectors that are most heavily influenced by the indirect and induced effects of coal shipments. For instance, Table 6 shows how the *indirect* effects of coal shipments influence specific economic sectors in terms of output and jobs. We have highlighted the top seven industries, which are the sectors that provide the most economic goods and services to the firms that are directly involved in coal shipments. For example, firms in the finance and insurance sector owe \$21.5 million of their economic output and 100 jobs to services provided to the firms that are directly linked to coal shipments within Hampton Roads.

TABLE 5
ESTIMATED ECONOMIC IMPACT OF COAL SHIPMENTS ON HAMPTON ROADS IN 2011

	Direct Impact	Indirect Impact	Induced Impact	Total Economic Impact
Output (in millions)	\$518.8	\$207.0	\$117.8	\$903.6
Earnings (in millions)	\$55.3	\$95.8	\$52.1	\$203.1
Employment	1,089 jobs	1,456 jobs	1,645 jobs	4,190 jobs

The *direct* and *indirect* economic effects generate income for resources owners throughout the local economy, which these owners then spend on additional goods and services. Table 7 illustrates how these induced effects reverberated through specific economic sectors in 2011. For instance, we see that health care and social assistance had an output estimate of \$28.1 million and a jobs estimate of 313.

TABLE 6

ESTIMATED INDIRECT EFFECTS ON INDIVIDUAL SECTORS IN HAMPTON ROADS IN 2011

Industry	Output (in millions of \$)	Jobs
Manufacturing	\$55.0	166
Transportation and Warehousing	\$28.9	307
Real Estate Rental and Leasing	\$22.1	120
Finance and Insurance	\$21.5	100
Professional, Scientific and Technical Services	\$20.6	156
Administrative and Waste Management Services	\$14.5	231
Construction	\$12.5	129
All Other Industries	\$32.0	247
Total (sum of all indirect economic effects)	\$207.0	1,456

TABLE 7

ESTIMATED INDUCED EFFECTS ON INDIVIDUAL SECTORS IN HAMPTON ROADS IN 2011

Industry	Output (in millions of \$)	Jobs
Real Estate, Rental and Leasing	\$34.3	243
Health Care and Social Assistance	\$28.1	313
Retail Trade	\$20.1	282
Finance and Insurance	\$17.0	76
Manufacturing	\$11.2	39
Other Services Including Households	\$9.8	120
Food Services and Drinking Establishments	\$8.2	154
All Other Industries	\$49.1	418
Total (sum of all induced economic effects)	\$177.8	1,645

Summing Up The Importance Of Coal In Hampton Roads

Coal shipments have a considerable impact on the economy of Hampton Roads, accounting for more than \$200 million in earnings and nearly 4,200 jobs in 2011 alone. The growth in coal movements over the past decade, when tonnage more than doubled from 20 million metric tons in 2002 to more than 47 million in 2011, also meant that this activity became increasingly important to our region's economy.

Even in the intermediate run, however, the outlook for coal-related activities in Hampton Roads appears mixed. The U.S. Energy and Information Administration (www.eia.gov) projects coal consumption in this country to grow by an average of 1.5 percent a year for at least the next 25 years. However, in the past few years, there has been a sharp decline in the proportion of electricity generated from coal and a significant increase in the proportion of electricity being generated from natural gas and other sources. According to the Energy Information Administration, coal production in the U.S. fell by 15.3 percent between 2008 and 2012; the decline was concentrated in the West, in states such as Wyoming, and in the East in the Appalachian corridor, the primary source of coal coming into the Port of Virginia.

Earlier this year, The Wall Street Journal carried the story "Coal Exports Plunge" (June 14, 2013), reflecting slacking demand in China, the world's largest consumer of coal. While exports do not claim a large percentage of U.S. coal production, the WSJ story noted that most exports of coal consist of metallurgical coal, which is more profitable to coal producers than thermal coal, most of which stays in the United States.

In any case, as Graph 6 divulges, coal's share in the generation of electricity in the U.S. also has fallen about 15 percent since 1998. Environmental concerns and the cost-effectiveness of natural gas are primarily responsible for this evolution.

It is reasonable to predict that coal will continue to decline in importance as a source of electrical power in this country. A senior executive at an electrical utility recently opined that he doubted that his utility would ever construct another generating facility using coal as a fuel. The Port of Virginia's prosperity, however, does not depend upon coal demand inside the United States. Instead, the primary destinations of coal shipments from the port are Europe and Brazil, and rapidly growing countries such as India, South Korea and Japan. Hence, the declining importance of coal in the U.S. may not impact the Port of Virginia's coal activities very much. Worldwide recession, however, would have a negative impact upon coal traffic exiting the United States from the Port of Virginia.

There are numerous other factors that will dictate how significant coal shipments will be to the future of Hampton Roads. How cost-competitive will our region's terminals remain relative to other facilities? Will the Port of Virginia realize benefits from dredging the Port of Virginia's channel to 55 feet (from the current depth of 50 feet)? This dredging would position our coal terminals favorably to handle larger vessels that will travel through both the Panama and Suez canals in the future.

GRAPH 6
SHARE OF U.S. ELECTRICITY GENERATED BY COAL, 1998-2012



Source: Mark Perry's Carpe Diem Blog, May 25, 2012, www.aei-ideas.org/channel/carde-diem



COAL: A VERY IMPORTANT ECONOMIC ENGINE IN HAMPTON ROADS

Where Our City and County Governments Spend Their Money



WHERE OUR CITY AND COUNTY GOVERNMENTS SPEND THEIR MONEY

During his first successful run for the presidency, Ronald Reagan proposed that the federal government take over responsibility for Medicaid, while passing on responsibility to the states for means-tested income transfers such as food stamps, temporary aid to needy families and the like. After Reagan was elected, his proposal never made much headway in Congress, not the least because many states were opposed to it.

Ironically, virtually every state today would leap to accept such a bargain because Medicaid expenditures are devouring their budgets. Currently, in Virginia, one out of every six dollars of general fund expenditures goes to Medicaid. If there is a lesson here, then it is that times change. And, when times change, governments alter their spending patterns.

Where do the city and county governments in Hampton Roads spend their revenues today? Have their spending patterns changed over time? We know our governmental units have had to cope with rapidly changing circumstances. Foremost has been the need to deal with the effects of the deepest economic downturn since the Great Depression. This has strangled government revenue growth even while it has increased the demand for certain kinds of expenditures that reflect higher rates of unemployment. Add to this stagnant or declining defense expenditures, transportation challenges that include the possibility of extending Norfolk's light rail system and the widespread imposition of tolls, the decline of the Historic Triangle as a tourist destination amidst a general decline in hotel revenue earned per available room in the region, underfunded pension systems, reduced state support for many city activities and continuing pressures to fund K-12 education. Elected officials could easily add other significant items to this list. Suffice it to say that our cities and counties face the classic economic problem – how to allocate their limited resources when faced with almost unlimited demands.

How have our localities reacted to this changing environment? In this chapter we examine the spending patterns of the cities and counties that make up the Hampton Roads region.



Contrasting Local Government Spending To That Of Others

Local government spending is quite different from the other tiers of government. Entitlements, national defense, health care and debt repayment dominate the federal budget. Medicaid, entitlements and education (including higher education) dominate state budget allocations. Meanwhile, at the local level, K-12 education accounts for approximately 40 percent of all local government spending, followed by police protection at about 10 percent.

In Virginia, the relationship between city and state government is distinctive. In most other states, cities reside within counties and city dwellers simultaneously are governed by a city government and a county government. The city of Chicago and Cook County, Ill., provide an excellent example of such joint jurisdiction.

Virginia cities, however, are "independent cities," and take the place of county governments within their city boundaries. Indeed, 39 of the 42 independent cities in the United States are in Virginia (the other three are Baltimore, St. Louis and Carson City, Nev.). Therefore, in our analysis, we will treat counties and cities identically in terms of their local spending.

GOVERNMENT SPENDING PATTERNS IN HAMPTON ROADS

Table 1 presents data on per capita spending for the cities and counties in Hampton Roads for the fiscal year ending in June 2010. Per capita spending is the appropriate statistic to investigate when looking at spending patterns because this measure adjusts the data for the size of the community. Per capita spending levels probably best demonstrate the commitment (or lack thereof) of local governments to selected activities.

The following spending definitions apply:

General Government: General costs of running government such as legislative spending (mayor and city/county staff, etc.), and office of Commissioner of the Revenue

Judicial: Legal system including courts and the office of the Commonwealth's Attorney

Public Safety: Law enforcement and protection, fire and rescue services, detentions and inspections

Public Works: Maintenance of roads and bridges, sanitation and waste removal, and maintenance of public buildings and grounds

Health: Health services spending, mental health and intellectual disability services, and social services

Education: Instruction, administration, transportation of students, maintenance of school buildings and school food services

Parks: Cultural activities, public libraries, and parks and recreation

Community Development: Planning, environmental management, cooperative development and cooperative extension activities.

In Table 1, per capita spending levels coded in blue indicate the highest per capita expenditures in our region and those coded in red reflect the lowest per capita spending levels. One can see that both the blue and red outliers typically are associated with the less-populated municipalities. This tells us that governmental unit size, by itself, is not necessarily the determinant of per capita spending differences. Economies of scale may exist that promote or discourage certain kinds of expenditures (for example, on parks and recreation), but the data in Table 1 tell us that other factors, such as the character of a community, may be even more important in determining spending patterns.

TABLE 1

2010 LOCAL GOVERNMENT SPENDING DATA PER CAPITA: HAMPTON ROADS CITIES AND COUNTIES

Locality	General Government	Judicial	Public Safety	Public Works	Health	Education	Parks	Community Development
Chesapeake	\$142	\$80	\$503	\$279	\$232	\$1,890	\$73	\$64
Franklin	\$245	\$27	\$856	\$509	\$555	\$1,933	\$119	\$178
Hampton	\$171	\$49	\$540	\$261	\$465	\$1,638	\$193	\$150
Newport News	\$143	\$55	\$611	\$211	\$431	\$1,789	157	\$163
Norfolk	\$105	\$63	\$715	\$377	\$480	\$1,555	\$200	\$121
Poquoson	\$150	\$29	\$452	\$188	\$201	\$1,672	\$109	\$54
Portsmouth	\$112	\$70	\$832	\$296	\$409	\$1,627	\$137	\$210
Suffolk	\$105	\$88	\$589	\$377	\$324	\$1,757	\$96	\$101
Virginia Beach	\$118	\$34	\$422	\$228	\$304	\$1,696	\$159	\$174
Williamsburg	\$181	\$25	\$690	\$227	\$274	\$1,754	\$163	\$351
Gloucester	\$129	\$53	\$268	\$51	\$258	\$1,588	\$51	\$273
Isle of Wight	\$124	\$42	\$247	\$170	\$306	\$1,559	\$79	\$49
James City	\$99	\$88	\$405	\$97	\$200	\$1,754	\$159	\$175
Southampton	\$78	\$85	\$334	\$159	\$323	\$1,558	\$24	\$33
Surry	\$201	\$89	\$328	\$127	\$487	\$2,250	\$83	\$78
York	\$120	\$53	\$470	\$177	\$206	\$1,909	\$80	\$127
Median (M)	\$126.50	\$54	\$486.50	\$219	\$314.50	\$1,725	\$114	\$138.50
Variance (V)	1,834	534	35,342	13,501	13,247	33,596	2,648	7,342
Ratio (V/M)	13.20	9.18	68.44	57.85	38.85	19.25	22.51	51.05

Source: "Comparative Report on Local Government Revenues and Expenditures for the Fiscal Year Ended June 30, 2010," Auditor of Public Accounts, Commonwealth of Virginia

Some small-population jurisdictions spend lots of money per capita on functions such as general government (Franklin, at \$245 per person, leads the region); however, other small jurisdictions can be found at the opposite end of the distribution (Southampton County, at \$78 per capita, brings up the rear).

When dealing with any set of data similar to that in Table 1, extreme values may push the average (mean) value of a variable up or down substantially. Hence, averages may provide a somewhat deceptive reading of what actually is typical. Therefore, we rely upon median values for most of our variables. The median value is the 50th percentile value – the one that divides the distribution of numbers into two parts of equal size. Hence, half of all values are above the median and half are below.

Spending levels close to the median indicate spending levels that are typical within Hampton Roads. For example, Isle of Wight County's per capita spending on general government (\$124) is very close to the median level (\$126.50). Public education spending per person in James City County/Williamsburg (\$1,754) and Suffolk (\$1,757) are very close to the median level for the region (\$1,725).

One can make the following observations based upon the data in Table 1:

- The most populous city in the region, Virginia Beach, usually expends less per capita on most services than the regional median.
- Older central cities, such as Norfolk and Portsmouth, exhibit large per capita spending on public works. This is casual evidence of a relatively simple proposition: infrastructure wears out.
- Franklin and Portsmouth have by far the largest per capita spending on public safety, while Norfolk spends the most per capita on parks.

The bottom three rows of Table 1 report the median value for each variable, the variance of each variable and the ratio of the variance to the median value. Variance is a measure of how dispersed, or variable, per capita spending is among the communities. The larger the variance, the more spread out the data are, while a smaller variance indicates less dispersion in the data. The bottom row presents the ratio of the variance in per capita spending to its median

value, thus providing us with a relative measure of data variability so that we can compare spending in one category to another.

Here are additional observations about spending variables we can make based upon Table 1:

- The highest variability in per capita spending among these governmental units occurs for the functions of public safety, public works and community development, in that descending order.
- The lowest levels of spending variability occur in the judicial category, followed by general government and education.
- With respect to education spending per capita, spending levels across our region are much less variable than many might suspect. This reflects the equalizing fashion in which Virginia distributes state financial support to school districts. The Commonwealth's Composite Index provides larger per student grants to school districts that face fiscal pressures due to large numbers of low-income households, or lower property values.

To make comparisons between governmental units easier, in Table 2 we divide the level of per capita spending by the average of the 16 communities and then multiply by 100 in order to determine the degree to which a given community spends more per capita than the regional average. A ratio greater than 100 indicates higher per capita spending levels than the regional average, while a ratio below 100 indicates the opposite. Thus, Newport News' 118 index number for public safety reveals that it spends 18 percent more per capita on public safety than the typical Hampton Roads city or county.

The following patterns emerge from Table 2:

- The fact that the median (50th percentile) value is below 100 for all but one service category indicates that a few jurisdictions spend a great deal on government services, thus pushing up the mean value. Most, however, do not.
- The following jurisdictions are “higher spending” units in that they have indexes above the 100 index level in at least five of the eight spending categories: Franklin, Williamsburg, Hampton, Newport News, Norfolk and Portsmouth. Those higher-than-average values are coded in blue in Table 2.

Except for Franklin and Williamsburg, they are older urbanized cities, where the perceived need for government spending is higher. Aging infrastructures and distinctive demographics typically stimulate higher government spending.

- **The following jurisdictions are “lower spending” units because they are below the 100 index level in at least five of the eight spending categories: Poquoson, Virginia Beach, Gloucester, Isle of Wight, Southampton and York.** These values are coded in red in Table 2. Except for Virginia Beach, these governmental units are suburban or rural in character (though large portions of Virginia Beach clearly could be classified as either suburban or rural). The perceived need for government services, if not the reality, causes these jurisdictions to

spend relatively less on government services than many other jurisdictions in our region.

- **Virginia Beach is an outlier. Despite some citizen complaints about public-sector spending in the resort city, except for education and parks, Virginia Beach’s spending indexes are below 100 and in some cases well below that number.** No doubt much of this has to do with the still youthful nature of the city of Virginia Beach, its distinctive demographics and the fact that most of its infrastructure is not old. Even so, Virginia Beach clearly does not belong in the big-spender category among the cities and counties of Hampton Roads. It will be interesting to see if these spending relationships change as the city ages and its demographics evolve.

- Franklin also is an outlier, with its per capita spending above regional averages in seven of eight categories (judicial providing the single exception). Franklin, settled in the 1830s as a railroad stop along the Blackwater River, was incorporated in 1876 and hence actually is an old city. Franklin’s demographics also more closely match the region’s large urban communities than most of the other rural jurisdictions. Finally, Franklin also has had to battle the closing of the International Paper Co. mill. Together, these influences have generated higher-than-average per capita government spending.



TABLE 2

RATIOS OF EACH JURISDICTION'S PER CAPITA SPENDING TO AVERAGE HAMPTON ROADS VALUES

Locality	General Government	Judicial	Public Safety	Public Works	Health	Education	Parks	Community Development
Chesapeake	102	138	97	120	68	113	62	45
Franklin	176	46	166	218	163	115	101	124
Hampton	123	84	105	112	136	98	164	104
Newport News	103	95	118	90	126	107	133	113
Norfolk	76	108	138	162	141	93	170	84
Poquoson	108	50	88	81	59	100	93	38
Portsmouth	81	120	161	127	120	97	116	146
Suffolk	76	151	114	162	95	105	82	70
Virginia Beach	85	58	82	98	89	101	135	121
Williamsburg	130	43	134	97	80	105	139	244
Gloucester	93	91	52	22	76	95	43	190
Isle of Wight	89	72	48	73	90	93	67	34
James City	71	151	78	42	59	105	135	122
Southampton	56	146	65	68	95	93	20	23
Surry	145	153	64	54	143	134	71	54
York	86	91	91	76	60	114	68	88
Median	91	93	94	93.5	92.5	103	97	96
Variance	946	1579	1320	2483	1140	118	1916	3547

Source: "Comparative Report on Local Government Revenues and Expenditures for the Fiscal Year Ended June 30, 2010," Auditor of Public Accounts, Commonwealth of Virginia

A STATISTICAL ANALYSIS OF SPENDING INFLUENCES

In order to determine the factors that may influence per capita spending in the Hampton Roads municipalities, we performed an analysis using multiple linear regression (a multivariate statistical technique often used by economists) to identify which factors influence spending level choices. In such an analysis, one attempts to explain the movements of a dependent variable such as spending on the basis of factors reasonably thought to affect spending.

We focused on two classes of factors thought to affect spending. The first class of factors attempts to reflect the impact of economic conditions on the spending of the municipality, while the second set concentrates on demographic differences. Things included in the first class of factors are median new housing prices, property tax revenue, median income, the amount of unfunded debt and poverty levels. We would expect, in general, that the first three of these would be positively associated with spending by local governments because they increase the ability of the local governments to provide services. We expect the last two (debt and poverty) to have a negative association because they diminish the ability of governmental units to supply services.

Communities with higher income levels may want more spending on public goods (for example, parks) and may demand more spending on education. Higher income in jurisdictions such as York County and Poquoson may prompt more spending on education. However, as will be discussed below, this is not a uniform relationship. Higher-income communities could prefer less spending on education if their residents wish to send their children to private schools and/or higher proportions of those communities consist of individuals who no longer have children of school age.

The second class of variables includes population density, the percentage of the population with college degrees and the extremes of the age distribution of citizens. A priori, higher population density should stimulate per capita government spending, while the effect of a higher percentage of citizens with college degrees is not so clear. Perhaps a higher educated citizenry may desire more spending on items such as parks and libraries. If a large share of the population in a city is under the age of 18, then we anticipate more spending

on education. On the other hand, a larger share of people 65 and older may suggest less money allocated to education.

Sixteen cities and counties (those in Hampton Roads) is a rather small sample to examine and there are predictable statistical problems associated with such a small sample size. Therefore, in order to increase the statistical reliability of the analysis, we examined data from all 134 cities/counties in the Commonwealth of Virginia for 2010. Table 3 presents the results of our statistical work, which should now be understood to reflect what is true in all of Virginia, not simply Hampton Roads.

In Table 3, a blue highlight indicates a statistically significant positive association, while a red highlight indicates a statistically significant negative association. A blank cell indicates that there is no persuasive statistical evidence that the variable affects spending. The results are consistent with other studies that have investigated the determinants of per capita spending by local governments.

In the analysis below we break out public safety into two components: fire and police services.

We can summarize the statistical results in Table 3:

- **Not surprisingly, the higher the property taxes in a city or county, the more that city or county spends per capita on each of the nine different services identified.**
- **Increased population density drives higher per capita spending on five of the nine services, notably (and again, not unexpected) police and fire.**

Statistical significance here refers to whether or not we could expect to obtain the same result if we took a new sample from the same population and executed the same analysis. In the case at hand, we applied a two-tailed test of each coefficient at the .10 level.

- The higher the percentage of the population under the age 18, the higher that city or county's per capita expenditures on education. On the other hand, we find no evidence that a more elderly population (a high proportion of individuals ages 65 and older) stifles per capita expenditures on education.
- Higher median incomes in a city or county are associated with lower expenditures on the following services: judicial, health/welfare and public works. Plausibly, there is not as much demand for expenditures upon the judiciary when a city or county has a population composed of individuals with higher median incomes; the same might be said for per capita expenditures on health/welfare. And, if high-median-income citizens are concentrated in newer jurisdictions, these jurisdictions will not have as many immediate needs for public works expenditures.

Our detailed statistical analysis enables us to consider how changes in several of the explanatory variables in our model affect per capita spending in a city or county. The single variable that is associated with an across-the-board increase in spending in all categories is property tax revenue. When cities and counties have more money available to spend, they spend it. **A 10 percent increase in a city or county's property tax revenue per capita stimulates an 8.6 percent increase in spending on parks and 7.5 percent increases in both fire services and public works spending. The area of spending that benefits the least amount from a property tax increase is education, where the impact of the hypothetical 10 percent increase will stimulate education spending by only 4 percent.** (To obtain the regression equation that is the basis for these estimates, send an email to jkoch@odu.edu.)

A 10 percent increase in the population density of a city or county increases spending on each of the protective categories (fire, police) by about 2.2 percent. The same 10 percent increase in population density increases spending on parks by 3.2 percent.

A 10 percent increase in the population of a city or county holding a bachelor's degree or higher increases spending on parks by 4 percent.

A 10 percent increase in the share of the population under the age of 18 increases spending on education by approximately 8 percent.



TABLE 3
STATISTICALLY SIGNIFICANT ESTIMATES: LEAST-SQUARES REGRESSION RESULTS

Spending Variable	Education	General Government.	Judicial	Police	Fire	Health/Welfare	Public Works	Parks	Community Development
Housing Prices	-			-				-	
Property Taxes	+	+	+	+	+	+	+	+	+
Median Income			-			-			
Unfunded Debt	-								
Poverty							+		
Population Density		+		+	+			+	+
Percent College Graduates								+	
Percent Population Less than 18	+	-							
Percent Population Greater than 65									

Ordinary least-squares regression models estimate using N-Logit statistical software. All highlighted variables are statistically significant at least 10 percent. The model was estimated in log linear form causing coefficients to represent elasticities.

EXAMINING EDUCATION EXPENDITURES IN GREATER DETAIL

In Table 4, we highlight overall education expenditures per pupil made by the cities and counties of Hampton Roads spanning a 10-year period. The data are from the 2001-02 and 2011-12 academic years, and come from the Superintendent's Annual Reports, www.doe.virginia.gov.

One can see that the weighted (by the number of pupils) average educational expenditure per pupil increased in our region from \$5,206 in 2001 to \$7,958 in 2011. This is an annual 4.5 percent increase, compounded. Since the Consumer Price Index rose 2.3 percent annually during this time, this means the real (inflation-adjusted) spending per pupil rose 2.2 percent annually over this decade.

A closer look at available data, however, reveals that declining school enrollments more than accounted for all of the increase in per pupil support.

Table 5 discloses that between 2001-02 and 2011-12, end-of-year average daily attendance (ADA) fell almost exactly 6 percent in the seven largest cities; in cities such as Newport News, Norfolk and Portsmouth, ADA fell more than 10 percent. Hence, if pupil enrollments in the seven cities had remained constant, then per pupil funding would have plunged. This casts a different light on the generosity of the cities with respect to their support of K-12 public education.

Even so, the citizens of Hampton Roads did increase their real per pupil financial commitment to K-12 education during this time period, and this increased support was almost double the rate of price inflation. (Interestingly, quite the opposite was true for the Commonwealth's per pupil support of its public colleges and universities.)

Given that the cities and counties have had more inflation-adjusted dollars per pupil to spend, how did they use those funds? It is beyond the scope of this report to examine specific expenditures, district by district. Nevertheless, one of the critical resource allocation decisions made by schools relates to how much money they devote to instruction versus administration/overhead. Holding other things constant, lean administrative structures are preferred.



Table 4 also reports on the proportion of each city or county's educational expenditures that are made on instruction. Instructional expenditures include teachers' salaries and benefits, supplies such as textbooks and any instructional services that the city/county contracts out, but do not include capital improvements, interest payments or any payments made to charter schools.

Columns 1 through 3 of Table 4 present education expenditure data for 2001, while columns 4 through 6 present expenditure data for 2011. One can see in column 6 the percentage of each educational budget expended on instruction in 2011 and that those 2011 numbers varied from a low of 67.81 percent in Surry to a high of 80.52 percent in Franklin. Among the region's seven largest cities, the percentages ranged from a low of 75.70 percent in Newport News to a high of 78.77 percent in Norfolk.

Of greater interest is the trend in instructional expenditures. Column 7 reports that the percentage of the educational budget devoted to instruction fell by 7.58 percent in Surry, 3.55 percent in Newport News and 1.99 percent in Virginia Beach. **Overall, the weighted average proportions of budgets devoted to instruction declined 1.28 percent within Hampton Roads. Prima facie, this is not a desirable trend. While skillful administrators are an essential part of K-12 education, face-to-face instructional contact is an even more important engine**

TABLE 4

SCHOOL DISTRICT SPENDING PER STUDENT ON INSTRUCTION, CITIES AND COUNTIES OF HAMPTON ROADS, 2001 AND 2011

District	Spending Per Pupil 2001	Spending on Instruction Per Pupil 2001	Percent Spent on Instruction 2001	Spending Per Pupil 2011	Spending on Instruction Per Pupil 2011	Percent Spent on Instruction 2011	Percent Change 2001-2011
Chesapeake	\$6,576.06	\$5,277.49	80.25%	\$10,502.07	\$8,395.79	79.94%	-0.31%
Franklin	\$8,192.70	\$6,537.69	79.80%	\$11,945.80	\$9,619.30	80.52%	+0.73%
Hampton	\$6,386.38	\$5,053.92	79.14%	\$10,082.04	\$7,816.92	77.53%	-1.60%
Newport News	\$6,515.63	\$5,163.64	79.25%	\$10,597.76	\$8,022.51	75.70%	-3.55%
Norfolk	\$7,135.94	\$5,743.75	80.49%	\$10,142.09	\$7,988.84	78.77%	-1.72%
Poquoson	\$5,919.83	\$4,624.75	78.12%	\$9,231.71	\$7,392.67	80.08%	+1.96%
Portsmouth	\$6,180.17	\$4,769.15	77.17%	\$10,305.39	\$7,883.14	76.50%	-0.67%
Suffolk	\$6,162.10	\$4,793.64	77.79%	\$9,346.47	\$7,267.88	77.76%	-0.03%
Virginia Beach	\$6,506.72	\$5,209.54	80.06%	\$10,339.96	\$8,072.31	78.07%	-1.99%
Williamsburg/ James City	\$7,437.63	\$5,636.54	75.78%	\$10,492.20	\$7,952.91	75.80%	+0.01%
Gloucester	\$6,315.28	\$4,819.13	76.31%	\$8,918.55	\$6,816.32	76.43%	+0.12%
Isle of Wight	\$6,480.34	\$5,163.69	79.68%	\$9,651.38	\$7,735.18	80.15%	+0.46%
Northampton	\$7,034.45	\$5,549.18	78.89%	\$11,296.00	\$8,554.74	75.73%	-3.15%
Southampton	\$6,789.99	\$4,959.04	73.03%	\$10,117.55	\$7,144.04	70.61%	-2.42%
Surry	\$9,533.72	\$7,187.45	75.39%	\$17,198.85	\$11,662.72	67.81%	-7.58%
York County	\$5,931.49	\$4,536.47	76.48%	\$9,370.79	\$7,253.23	77.40%	+0.92%
Weighted Averages	\$6,573.13	\$5,206.26	79.21%	\$10,231.25	\$7,958.81	77.79%	-1.28%

Sources: Superintendent's Annual Reports, 2001-2002 and 2011-2012, Virginia Department of Education, http://www.doe.virginia.gov/statistics_reports/supts_annual_report/2001_02/index.shtml

TABLE 5

**END-OF-YEAR AVERAGE DAILY ATTENDANCE (ADA)
FOR THE SEVEN LARGEST CITIES IN HAMPTON ROADS,
2001-2002 AND 2011-2012**

City	ADA 2001-2002	ADA 2011-2012	Percent Change
Chesapeake	36,132	37,271	+3.2%
Hampton	21,708	19,662	-9.4%
Newport News	29,412	26,371	-10.3%
Norfolk	32,510	28,895	-11.1%
Portsmouth	15,858	13,537	-14.6%
Suffolk	11,508	13,310	+15.7%
Virginia Beach	71,504	66,528	-7.0%
Totals	218,632	205,574	-6.0%

Source: Superintendent's Annual Reports, www.doe.virginia.gov

Final Thoughts

Given the diversity of the cities and counties in Hampton Roads, perhaps we should not be surprised that it is difficult to find many common spending patterns among them. Yes, the cities and counties that raise more revenue spend more than others. And, our urban cities spend more on items such as law enforcement than other governmental units. However, it is difficult to detect strong patterns in terms of other governmental functions such as parks and recreation.

All of the cities and counties are spending more per student on education, even after accounting for price inflation, than they did 10 years ago. A very important reason for this, however, is declining student enrollment. Further, there has been a tendency for most of the school districts to reduce their proportionate expenditures on instruction and to increase their proportionate expenditures on administration. On the face of it, this is not a desirable trend.

for increased student achievement. In the region's seven largest cities, the proportion of education expenditures devoted to instruction declined in every municipality, though the declines were very small in Chesapeake, Portsmouth and Suffolk.

Some of the changes between 2001 and 2011 revealed in Table 4 may be related to patterns of Commonwealth K-12 funding. Over the 10-year period, there was a tendency for cities and counties to devote a lower percentage of their education budgets to instruction if the proportion of their budgets coming from the Commonwealth also declined. **In a nutshell, school districts tended to defend administrative expenditures at the expense of instruction when state support tapered off.**

When we examine K-12 education funding in Hampton Roads, several conclusions are in order. First, despite the tendency of the Commonwealth to shift the responsibility for some K-12 expenditures to the cities and counties, per student funding of K-12 education rose even after price inflation was taken into account.

Asian Indians in Hampton Roads



ASIAN INDIANS IN HAMPTON ROADS

How should we refer to the best-educated, most prosperous ethnic group in Hampton Roads? Should they be labeled "Indian Americans," "Americans from India" or "Asian Indians"? We adopt Asian Indians because a majority of Asian Indians in Hampton Roads prefer that designation and it averts confusion with Native Americans in the United States, who historically have been known as Indians.

Asian Indians, who number almost 7,000 in Hampton Roads, are anything but an ordinary ethnic group. According to the American Community Survey, the mean household income of Asian Indians was \$86,130 in 2010, 65.9 percent higher than the U.S. average. Fully 69 percent of Asian Indians ages 25 or older had earned a bachelor's degree or higher, while this was true for only 27.9 percent for the entire U.S. population.

More than 61 percent of the Asian Indians residing in Hampton Roads were born outside of the United States. When they entered this country, many already were well educated, or they came here to enroll in graduate and professional programs. Also, as we shall see, a majority of recent H1-B "specialty occupations" visa recipients coming into the U.S. have been Asian Indians. These are talented, ambitious individuals, and this talent and ambition have translated into conspicuous success throughout the country and here in Hampton Roads.

Background

In 2012, the Pew Research Center published a comprehensive study of Asian Americans, "the highest-income, best-educated and fastest-growing racial group in the United States" ("The Rise of Asian Americans," 2012, www.pewsocialtrends.org/files/2013/04/Asian-Americans-new-full-report-04-2013.pdf). Based on U.S. Census data and an extensive telephone survey, the study paints a remarkable portrait of Asian American success. Its main findings include:

- Approximately 18 million Asian Americans now make up nearly 6 percent of the U.S. population. Fifty years ago, this group represented less than 1 percent of the U.S. population.
- Since 2009, Asians have surpassed Hispanics as the largest group of new immigrants to the U.S.
- Because 61 percent of recent Asian immigrants ages 25-64 possess a college degree, they are likely "the most highly educated cohort of immigrants in U.S. history."
- The median income of Asian Americans in 2010 was \$66,000 – substantially higher than any other racial group, as well as the U.S. population at large.
- Survey findings indicate that Asian Americans are more satisfied than the general public with their lives overall (82 percent vs. 75 percent), their personal finances (51 percent vs. 35 percent) and the general direction of the country (43 percent vs. 21 percent).

The Pew study looked at U.S. residents (regardless of citizenship or immigration status) whose family origins could be traced to the original peoples of the Far East, Southeast Asia or the Indian subcontinent (see Table 1). Chinese Americans represent the largest Asian subgroup in the United States today, followed by those with family origins in the Philippines, India, Vietnam, South Korea and Japan. Among these six subgroups, Asian Indians stand out. The Pew study suggests (see Table 2) that Asian Indians have even higher incomes, are better educated and are faster growing than the Asian American population as

a whole. They are younger and more likely to be married with children. Asian Indians are not as concentrated in the American West as other Asian American subgroups; more than one-quarter live in Virginia and other Southern states.

Asian Indians are one of several fast-growing ethnic constituencies (see Graph 1) that have transformed Hampton Roads into a significantly more diverse region within the last decade. Among recent arrivals, Asian Indians are distinguished

by a degree of economic, political and cultural influence that vastly exceeds what might be expected from a predominantly new-arrival minority group.

This chapter will explore the growth of Hampton Roads' Asian Indian community, as well as the common features and values that unite many of its members. We'll also provide a brief overview of the leading institutions that represent and serve our region's Asian Indian population.

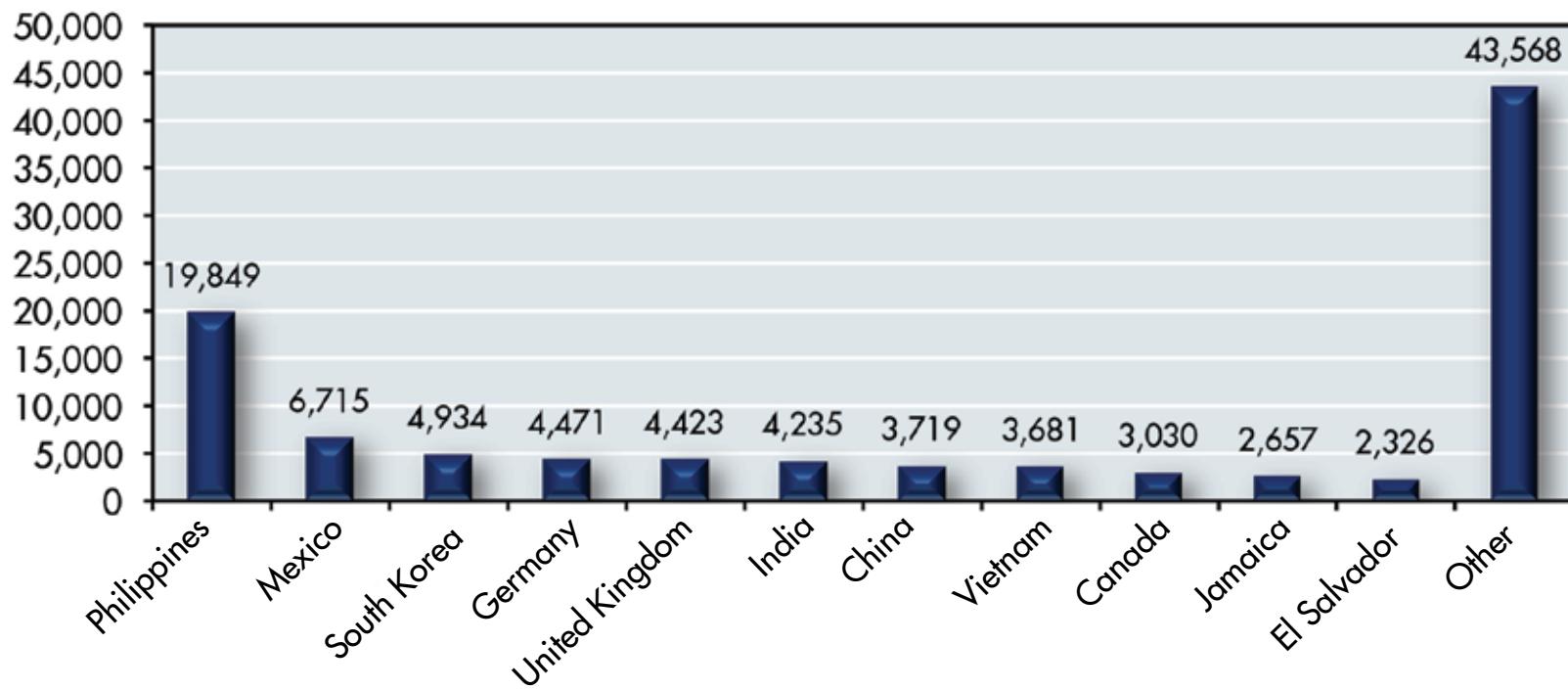
TABLE 1
CHARACTERISTICS OF ASIAN INDIAN ADULTS IN THE U.S., 2010

Characteristic	All Americans	All Asians	Asian Indians
Foreign born	15.8%	74.1%	87.2%
Citizen	91.4%	69.6%	56.2%
Median age (in years)	45	41	37
Married	51.4%	59.0%	70.9%
Fertility (women aged 18-44)			
Had a birth in the last 12 months	7.1%	6.8%	8.4%
Of these, % unmarried	37.1%	14.6%	2.3%
College educated (ages 25+)	28.2%	49.0%	70.0%
Median annual personal earnings (full-time, year-round workers)	\$40,000	\$48,000	\$65,000
Median annual household income	\$49,800	\$66,000	\$88,000
Language			
Speaks English very well	90.4%	63.5%	76.2%
Speaks English less than very well	9.6%	36.5%	23.8%
Region of residence			
Northeast	18.3%	20.1%	31.1%
Midwest	21.6%	11.3%	16.8%
South	37.0%	21.5%	28.5%
West	23.0%	47.1%	23.5%

Source: Pew Research Center, "The Rise of Asian Americans," p. 44, at www.pewsocialtrends.org/files/2013/01/SDT_Rise_of_Asian_Americans.pdf

GRAPH 1

CHANGES IN THE NUMBER OF FOREIGN-BORN RESIDENTS OF HAMPTON ROADS BY ORIGIN BETWEEN 2000 AND 2011



Sources: 2007-2011 American Community Survey 5-year estimates, at <http://factfinder2.census.gov/>, and U.S. Census data (2000), at <http://factfinder.census.gov>

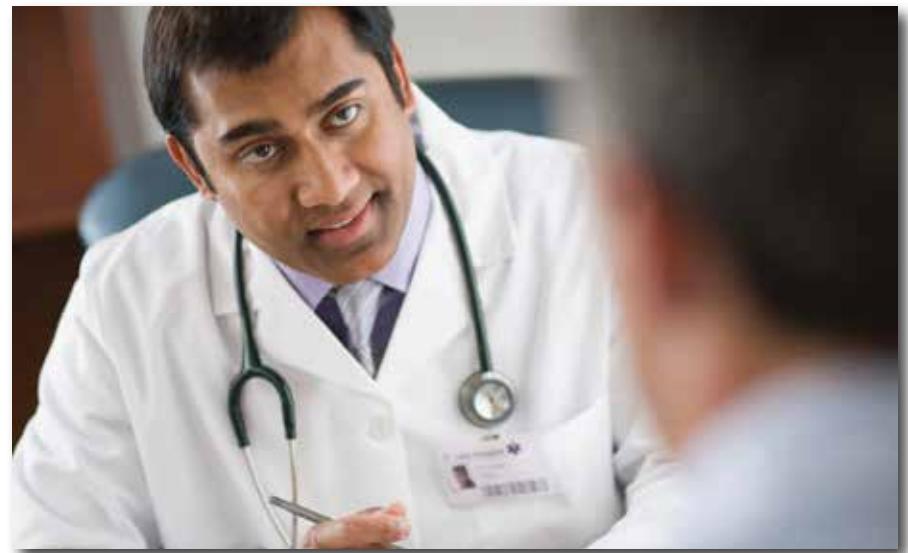
Asian Indian Immigration: A Brief History

The successes of the Asian Indian community are all the more remarkable given that before 1965, very few people of Asian Indian ancestry lived in Hampton Roads – or for that matter, anywhere else in the United States. The chief reason for this was a U.S. immigration policy that blatantly discriminated against Asians and other non-European groups.

A first, small cohort of Indian immigrants came to the United States in the early years of the 20th century. Beginning in 1907, around 6,400 migrants from the Indian subcontinent arrived on the U.S. West Coast. They were overwhelmingly young men from the Punjab region with little or no education. They came to earn money as agricultural laborers; most did not intend to settle permanently. In any case, this would have been difficult, as federal and state laws forbade Indian migrants from owning property, marrying white women or becoming naturalized U.S. citizens. The Immigration Law of 1917 stopped new arrivals from India altogether. Census data indicate that by 1940, only 2,405 Asian Indians remained in the U.S. “Their educational level,” writes historian Ronald Takaki, “was the lowest of all racial and ethnic groups reported in the census: the median number of school years completed by Asian Indians was only 3.7” (“Strangers from a Different Shore: A History of Asian Americans,” 1998, p. 314).

World War II was an important turning point in the history of Asian Indians in the U.S. Overt racism gradually became less frequent in American society and the nation’s immigration policy changed to reflect this. U.S. lawmakers sought to acknowledge Asian Indians’ contribution to the Allied war effort, and to show support for the newly independent Indian democracy. Asian Indians gained naturalization rights, and a new immigration quota allowed as many as 12,000 Asian Indians to enter the U.S. between 1947 and 1965.

However, the key watershed was the Immigration and Nationality Act of 1965. This legislation eliminated existing immigration restrictions based on national origin, replacing them with a tiered preference system based on the principle of “family reunification” and the needs of U.S. employers. Scientists, engineers



and other professionals, particularly those with skills to support emerging high-tech industries, were among those who benefited most from the new immigration policy. These highly skilled professionals, and their families, came to define the new wave of Asian Indian immigration that commenced in the final third of the 20th century.

Asian Indians quickly became and have remained one of the country’s fastest-growing immigrant groups: “The number of new Asian Indian immigrants skyrocketed from 467 in 1965 to 8,795 in 1970. Between 1971 and 1980, 164,134 Asian Indians were admitted, followed by another 250,786 between 1981 and 1990” (Roli Varma, “Harbingers of Global Change: India’s Techno-Immigrants in the United States,” 2006, p. 21).

Asian Indians were well positioned to benefit from the post-1965 change in immigration policy for a number of reasons, including English language proficiency (a legacy of British colonial rule) as well as a strong cultural emphasis on math and science achievement. The educational, economic and professional opportunities offered by the United States have been highly attractive to Asian Indian émigrés. Many Asian Indians (particularly young men) came to pursue graduate study in the U.S., later converting their temporary

status into permanent residency and bringing along spouses, children and other family members.

The H-1B visa program, which was introduced in 1990, has brought more Indians to American workplaces in the past quarter century. H-1B visas allow highly skilled foreign workers in “specialty occupations” to live and work in the U.S., with an employer’s sponsorship, for up to six years. The great majority of all H-1B visas are issued in the IT sector; most often they go to citizens of India. Of the nearly 130,000 H-1B visas issued in 2011, more than half (72,438) went to workers of Indian nationality (see Table 2). Several of the IT companies that consistently sponsor the most workers on H-1B visas – including Infosys, Wipro and Tata Consultancy Services – are themselves based in India.

Today, more than 3 million people of Asian Indian ancestry live in the United States, comprising approximately 1 percent of the entire U.S. population.

TABLE 2

H-1B VISAS ISSUED, UNITED STATES, FY 2011

India	72,438
China - mainland	10,849
United Kingdom	3,660
South Korea	3,501
Mexico	2,647
Philippines	2,369
France	2,069
Japan	2,054
China - Taiwan	1,705
Germany	1,627
Other	26,215
TOTAL	129,134

Source: Pew Research Center, “The Rise of Asian Americans,” p. 27, at: www.pewsocialtrends.org/files/2013/01/SDT_Rise_of_Asian_Americans.pdf

Who Are Hampton Roads’ Asian Indians?

Hampton Roads is home to a substantial Asian Indian community – close to 7,000 people, according to Pew and U.S. Census figures. The greatest number (2,274) live in Virginia Beach, while Williamsburg and York County boast the highest proportion (just over 1 percent) of Asian Indians in their populations, possibly due to the influence of the College of William & Mary and NASA Langley Research Center, and the hotel industry (see Table 3). A review of Graph 1 reveals that among Hampton Roads’ foreign-born population, India is the sixth-most influential place of origin, behind the Philippines, Mexico, South Korea, Germany and the United Kingdom. U.S. Census figures suggest that the Asian Indian-born population of Hampton Roads has more than doubled in the past decade – the fastest rate of growth among all Asian subgroups in our region.

The Asian Indian community of Hampton Roads is the third largest in the Commonwealth of Virginia, behind Northern Virginia and the Richmond metropolitan area. (By a wide margin, the highest concentration of Asian Indians – 47,544 – live in Fairfax County.) Census figures show that Virginia residents of Asian Indian descent are younger and more likely to live in a married-couple household with children than Virginia’s population at large.

Nearly 78 percent of Virginia’s Asian Indians over the age of 25 possess a bachelor’s degree or higher, compared to nearly 34 percent of the general population in the same age group. Table 4 discloses that more than half (52.5 percent) of Virginia’s Asian Indian households earn \$100,000 or more per year, compared to 27.6 percent of all Virginia households. Graph 2 illustrates these income differences as well as the impressive educational attainment of Asian Indians in the Commonwealth.

TABLE 3
THE ASIAN AMERICAN POPULATION: HAMPTON ROADS, VIRGINIA AND THE U.S. (2010)

	Asian Indian	Chinese (except Taiwanese)	Filipino	Japanese	Korean	Vietnamese	Total Population	Total Asian Population	Asian Share of Population	Asian Indian Share of Population
Chesapeake	986	825	4,583	648	803	616	222,209	9,136	4.11%	0.44%
Currituck County (N.C.)	16	23	151	35	32	6	23,457	282	1.20%	0.07%
Franklin	13	18	24	6	14	21	8,582	102	1.19%	0.15%
Gloucester County	33	82	111	63	60	27	36,858	463	1.26%	0.09%
Hampton	332	437	1,267	369	496	888	137,436	4,490	3.27%	0.24%
Isle of Wight County	22	63	161	61	84	19	35,270	477	1.35%	0.06%
James City County	315	350	500	190	448	104	67,009	2,186	3.26%	0.47%
Mathews County	8	9	21	3	11	4	8,978	60	0.67%	0.09%
Newport News	569	616	2,194	614	1,608	672	180,719	7,438	4.12%	0.31%
Norfolk	963	1,163	6,326	488	580	528	242,803	10,999	4.53%	0.40%
Poquoson	46	71	59	37	92	15	12,150	346	2.85%	0.38%
Portsmouth	131	191	826	98	106	127	95,535	1,658	1.74%	0.14%
Southampton County	18	3	27	2	5	2	18,570	73	0.39%	0.10%
Suffolk	259	261	756	147	260	165	84,585	1,997	2.36%	0.31%
Surry County	12	4	9	4	4	0	7,058	40	0.57%	0.17%
Virginia Beach	2,274	2,842	22,092	1,609	1,802	2,097	437,994	34,647	7.91%	0.52%
Williamsburg	208	279	99	50	203	59	14,068	1,026	7.29%	1.48%
York County	658	663	716	323	1,206	272	65,464	4,286	6.55%	1.01%
Hampton Roads	6,863	7,900	39,922	4,747	7,814	5,622	1,698,745	79,706	4.69%	0.40%
Virginia	114,471	68,707	90,493	20,138	82,006	59,984	8,001,024	534,561	6.68%	1.43%
United States	3,183,063	3,794,673	3,416,840	1,304,286	1,706,822	1,737,433	308,745,538	17,941,286	5.81%	1.03%

Sources: Pew Research Center, at www.pewsocialtrends.org/asianamericans-maps, and American Fact Finder, at <http://factfinder2.census.gov>

TABLE 4**SELECTED SOCIAL AND ECONOMIC CHARACTERISTICS OF ASIAN INDIANS IN VIRGINIA (ALONE OR IN ANY COMBINATION)**

Households by Type	Asian Indians	Total Population
Total households	34,428	2,974,481
Percent married-couple family	70.5%	51.1%
Percent male householder, no wife present, family	2.4%	4.1%
Percent female householder, no husband present, family	3.7%	12.0%
Percent nonfamily households	23.5%	32.8%
Percent households with one or more people under 18 years	47.7%	33.7%
Percent households with one or more people 65 years and over	10.3%	22.4%
Average household size	2.99	2.56
Educational Attainment		
Population 25 years and over	67,727	5,208,536
Percent high school graduate or higher	93.9%	86.1%
Percent bachelor's degree or higher	77.7%	33.8%
Place of Birth		
Total population	103,348	7,841,754
Percent foreign-born	69.1%	10.8%
Employment Status		
Civilian labor force	57,190	4,065,244
Percent unemployed	4.3%	5.9%
Industry		
Civilian employed population 16 years and over	54,730	3,824,131
Agriculture, forestry, fishing and hunting, and mining	0.1%	1.1%
Construction	1.3%	7.5%
Manufacturing	3.0%	8.2%
Wholesale trade	0.9%	2.2%
Retail trade	9.3%	10.8%
Transportation and warehousing, and utilities	3.7%	4.2%
Information	4.9%	2.5%

TABLE 4**SELECTED SOCIAL AND ECONOMIC CHARACTERISTICS OF ASIAN INDIANS IN VIRGINIA (ALONE OR IN ANY COMBINATION)**

Finance and insurance, and real estate and rental and leasing	10.5%	6.7%
Professional, scientific, and management, and administrative and waste management services	36.1%	14.2%
Educational services, and health care and social assistance	15.8%	20.3%
Arts, entertainment, and recreation, and accommodation and food services	6.5%	8.0%
Other services, except public administration	2.1%	5.2%
Public administration	5.8%	9.0%
Income and Benefits (In 2010 Inflation-Adjusted Dollars)		
Total households	34,428	2,974,481
Percent earning \$24,999 or less	6.8%	18.8%
Percent earning \$25,000 to \$49,999	9.3%	22.1%
Percent earning \$50,000 to \$74,999	15.3%	18.3%
Percent earning \$75,000 to \$99,999	16.2%	13.2%
Percent earning \$100,000 to \$149,999	26.1%	14.9%
Percent earning \$150,000 to \$199,999	12.2%	6.4%
Percent earning \$200,000 or more	14.2%	6.3%
Median household income	\$101,829	\$61,406

Source: 2006-2010 American Community Survey Selected Population Tables, at: <http://facifinder2.census.gov/>

GRAPH 2

COMPARING THE EDUCATIONAL ATTAINMENT AND INCOMES OF ASIAN INDIANS IN VIRGINIA TO ALL OTHER VIRGINIANS

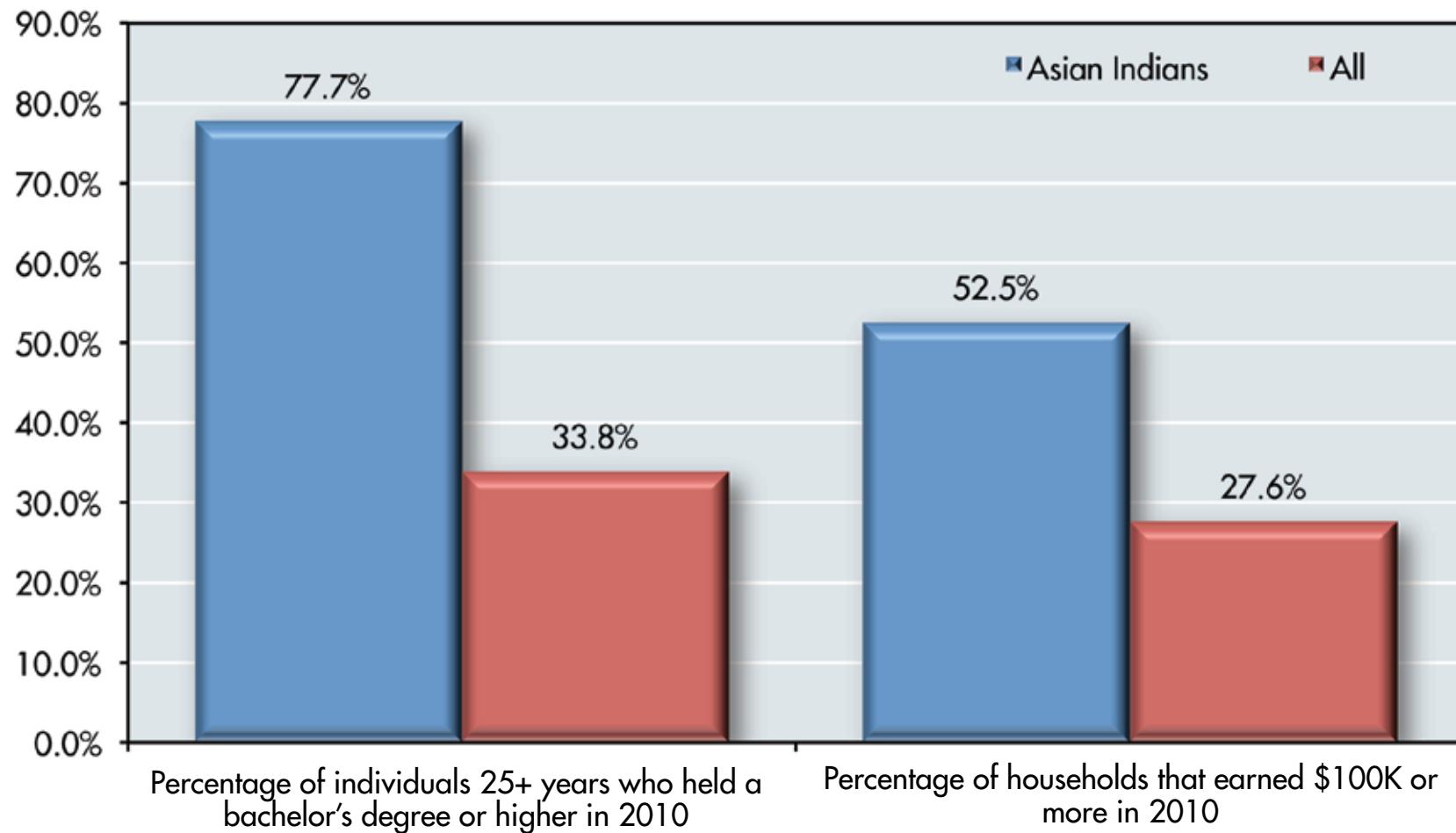


TABLE 5
VALUES AND ATTITUDES OF ASIAN INDIANS IN THE U.S. AND HAMPTON ROADS

	U.S. Total	U.S. Asians	U.S. Asian Indians	Hampton Roads Asian Indians
Percent saying they are satisfied with their lives today	75%	82%	84%	93%
Percent saying they are satisfied with the way things are going in this country today	21%	43%	47%	45%
Percent rating their personal financial situation as "excellent" or "good"	35%	51%	67%	82%
Percent saying "Most people who want to get ahead can make it if they're willing to work hard"	58%	69%	75%	82%
Percent saying being a good parent is one of the most important things in their lives	50%	67%	78%	93%
Percent saying helping other people in need is one of the most important things in their lives	20%	28%	32%	32%
Percent saying they have personally experienced discrimination or been treated unfairly in the past 12 months because they are Asian/Asian Indian)	NA	19%	18%	23%
Percent saying they consider themselves a Republican in politics today	26%	18%	10%	14%
Percent saying they consider themselves a Democrat in politics today	32%	33%	44%	46%
Percent saying they consider themselves an independent in politics today	36%	34%	34%	21%

Sources: for U.S. data: Pew Research Center, "The Rise of Asian Americans," at: www.pewsocialtrends.org/files/2013/01/SDT_Rise_of_Asian_Americans.pdf; for Hampton Roads data: Informal online survey taken by 94 members of Hampton Roads' Asian Indian community (April/May 2013)

Census figures show that more than one-third (36.1 percent) of Virginia's Asian Indians are employed in the professional and scientific services sector, followed by 15.8 percent in educational services and health care. Hampton Roads universities and medical centers employ many of the Asian Indians in our region; another influential contingent works in the engineering and IT fields. Asian Indians occupy yet another niche in our regional economy as small-business owners; they own or operate numerous restaurants, convenience stores and hotels across Hampton Roads. According to a recent estimate from the coordinators of Taste of India, an annual celebration held on the Old Dominion University campus, Indian Americans own at least 90 hotels and 60 small retail businesses locally.

The members of Hampton Roads' Asian Indian community reflect the diversity of India itself, which consists of 28 different states and seven union territories. Hundreds of languages and dialects are spoken throughout India. Although Hindi and English are used countrywide, each state has its own set of officially

recognized languages. For Asian Indians in Hampton Roads, therefore, English is not merely the language of their adopted home country, but it is also a common language of understanding among other émigrés. While Hampton Roads' Asian Indians hail from all regions of the subcontinent, an especially large number have family ties to the western state of Gujarat, and are native speakers of Gujarati. Any gathering of Asian Indians in Hampton Roads is likely to include families with common Gujarati surnames, such as Patel and Shah.

The Pew Research Center survey suggests that nationwide, Asian Indians lean toward the Democratic Party politically. Our own informal online survey, which was completed by 94 members of Hampton Roads' Asian Indian community, returned similar results (see Table 5). Hampton Roads' Asian Indians have been notably active in the political arena as financial donors. Indeed, one measure of this community's substantial political and economic clout is the turnout of prominent elected officials at Hampton Roads' largest Asian Indian gatherings. Senators Tim Kaine and Mark Warner both made formal appearances at Taste

of India in April 2013; Congressmen Scott Rigell and Bobby Scott attended India Fest, another area celebration, in September 2012.

The U.S. India Political Action Committee (USINPAC) is not explicitly partisan, but was established in 2002 to present a unified political voice among Asian Indians, and to "impact policies that concern the Indian-American community" (www.usinpac.com/home/about-usinpac).

In addition to supporting Asian Indian political candidates, USINPAC has been most active in promoting U.S.-India relations as well as immigration and visa reforms. Nationwide, a growing number of second-generation Asian Indians have run successfully for office; Governors Nikki Haley of South Carolina and Bobby Jindal of Louisiana (both Republicans) are notable examples. This spring, Aneesh Chopra ran for lieutenant governor of Virginia as a Democrat. Although he was defeated in the primary election, he holds the distinction of being the Commonwealth's first Asian Indian to seek statewide office.

Nearly all of the long-standing Asian Indian residents of Hampton Roads with whom we spoke commented on the remarkable growth of the region's Indian community and community infrastructure within the past decades. Community leader Jagdish Singh recalled in a Virginian-Pilot article that when she and her husband moved to the area in 1967, there were "only three other Indian families in all of Hampton Roads" (Megan Hoyer, The Virginian-Pilot, Feb. 5, 2011).

Saileela Venkatesan told us about the shopping trips to the Washington, D.C., area that she and other families coordinated in the 1970s because there were no local stores that specialized in Indian groceries. Swagat Indian Spices and Specialties opened on Aragona Boulevard in Virginia Beach 25 years ago, and today numerous Indian and international grocery stores can be found throughout Hampton Roads. Nawab on Military Highway in Norfolk became the region's first Indian restaurant in 1992. Owner Ashok Arora has since opened additional locations in Virginia Beach, Williamsburg and Newport News. Today, the Nawab restaurants are joined by many other establishments throughout the region that serve Indian cuisine.

The Pew survey findings indicate that 84 percent of Asian Indians nationwide are satisfied with their lives today; an impressive 93 percent of the participants

in our informal survey responded the same way (see Table 6). The first- and second-generation Asian Indians with whom we spoke seemed pleased overall with their lives in Hampton Roads. Many told us that they appreciated that the Asian Indian community here was vibrant and active, but not oppressively so. There is no one neighborhood or locality where an overwhelming number of Indians have chosen to live; the degree of assimilation with the rest of the population is high. Several people told us they appreciated the mild climate in Hampton Roads, compared to regions farther north. Others mentioned that Hampton Roads' proximity to other East Coast Indian communities – particularly New York/New Jersey and the greater Washington, D.C., area – meant that close friends and family members were not far away.

Are Asian Indians subject to discrimination here in Hampton Roads? A minority (23 percent) of our online survey respondents indicated that they had personally experienced discrimination or been treated unfairly in the past 12 months because they were Indian or of Indian ancestry. Reflecting on this result, a younger member of the regional community stated, "Even though 23 percent say they have faced discrimination, I was surprised to see such a huge figure, since in my four years in Hampton Roads, I have never been a victim of discrimination. I have faced discrimination in New York and Chicago, but never in Hampton Roads."

In person, a few members of the Asian Indian community in Hampton Roads suggested to us that a greater problem has been Indians discriminating among themselves – referring to the social, religious and ethnic distinctions that sometimes can create a sense of division in Asian Indian communities. Overall, however, there seems to be a broad consensus that the relatively small and geographically dispersed Asian Indian population in Hampton Roads, compared with those in larger urban areas, has tended to enhance cooperation among those whose families originally came from different backgrounds in India.

Institutions

Hampton Roads is home to several institutions that provide focal points for the Asian Indian community. These organizations work cooperatively with one another and have, in many cases, overlapping constituencies. They are distinguished by a generous commitment to charitable giving that has benefited scholarship funds and other worthy causes in our region and beyond. The groups' representatives emphasize that they welcome the participation of not just Asian Indians, but all members of the broader Hampton Roads community.

ASIAN INDIANS OF HAMPTON ROADS

The most long-standing of these organizations is Asian Indians of Hampton Roads (AIHR), which was established in the 1970s as Asian Indians of Tidewater. As summarized to us by AIHR President Mohit Gour, the organization's purpose is twofold: to provide support and a point of connection for the region's Asian Indians, and to raise awareness and promote India's cultural heritage throughout Hampton Roads. AIHR currently has around 70 formal members, exerting a broader influence through its sponsored events and participation in other community initiatives.

AIHR's signature event is the Republic Day commemoration, held in honor of the adoption of India's constitution on Jan. 26, 1950. This smaller-scale event, also in its 17th year, usually includes a panel discussion to address political and economic issues that concern India and U.S.-India relations. Nirupama Rao, the Indian ambassador to the United States, participated in the most recent Republic Day event at the Hindu Temple and Community Center in Chesapeake.

SITES OF RELIGIOUS GATHERING: THE HINDU TEMPLE AND COMMUNITY CENTER OF HAMPTON ROADS, THE BAPS SHREE SWAMINARAYAN MANDIR AND THE GURUDWARA SAHIB

Approximately 80 percent of the population of the Republic of India today are followers of Hinduism. Muslims comprise the next-largest religious group, followed by Christians, Sikhs, Buddhists, Jains, Zoroastrians and others. This

diversity has enriched the religious landscape of Hampton Roads, where Asian Indian followers of all these world religions now reside.

The Hindu Temple and Community Center of Hampton Roads, located on Dominion Boulevard in Chesapeake, is the largest religious gathering point for Asian Indians in our region. A first temple opened on the site in 1991; after an accidental fire three years later, the current facility was constructed and has been in use since 1997. The organization's website states that "the Hindu religion is not simply a religion of rituals, since it integrates culture and religion into our daily lives and our Temple Complex will provide a focal point for the religious as well as the cultural activities of our community" (Ram C. Dahiya, "A Brief History of the Hindu Temple of Hampton Roads," www.hindutemplehr.org/about-temple).

The temple is open every day for religious observances and a wide array of other group meetings and activities. The temple sponsors dance classes, a cricket club, a group for seniors known as Jeevan Sandhya Mandal and cultural classes for children. Yoga therapy classes each Sunday morning attract area residents who are not necessarily practicing Hindus. The celebration of major Hindu festivals like Diwali and Holi are well-attended highlights of the temple's calendar.

Another Hindu site of worship is the BAPS Shree Swaminarayan Mandir, located on Jefferson Avenue in Newport News. BAPS, short for Bochasanwasi Shri Akshar Purushottam Swaminarayan Sanstha, is a worldwide organization with roots in the Indian state of Gujarat.

The center of Hampton Roads' Sikh community is Chesapeake's Gurudwara Sahib. The Gurudwara is sponsored by the Guru Nanak Foundation of Tidewater, named after the first Sikh prophet. The Gurudwara was constructed in 2006; before then, Sikh gatherings were held throughout the region in private homes or other temporary facilities. Community representative Surinder Dhillon estimates that Hampton Roads is now home to approximately 100 Sikh families, many of whom emigrated from India's Punjab region. The Gurudwara's regular Sunday services attract families from as far away as Williamsburg to the north, and Elizabeth City to the south. Universal equality and service to the community are among the doctrines emphasized in Sikhism. As such, Hampton

Roads' Sikhs have been active participants in regional interfaith initiatives and charitable causes that assist the less fortunate. Since 2011, the Guru Nanak Foundation has sponsored an annual "Fun for Everyone Day" with Indian cuisine and activities for all ages on the grounds of the Gurudwara.

AAPi – HAMPTON ROADS

Asian Indians are well represented in our region's medical community. The 2013 Taste of India program listed 146 physicians of Indian origin who practice medicine in Hampton Roads. Eighty-two are identified as current or recent active members of AAPi, the Association of American Physicians of Indian Origin. AAPi is a nationwide organization, founded in 1982, that provides a networking forum for its members "to excel in patient care, teaching and research and to pursue their aspirations in professional and community affairs" (<http://aapiusa.org/about/mission.aspx>). Both first- and second-generation Asian Indians are active in the Hampton Roads chapter; they represent a wide spectrum of medical specialties and regional backgrounds.

Since 2010, AAPi-HR has sponsored an annual charity gala at the Half Moone Cruise and Celebration Center in downtown Norfolk. The event was motivated by members' desire to give back to the Hampton Roads community. In 2011, outgoing chapter president Rajnish Dhawan told The Virginian-Pilot that "we all treat patients almost every day, and we see the underprivileged in the hospitals. ... The whole idea was: If we can collect funds, we can promote free clinics and help the untreated population" (Gary Ruegsegger, The Virginian-Pilot, Feb. 11, 2011). Current chapter president Pramod Malik reports that the galas have raised more than \$300,000 for area clinics and an Eastern Virginia Medical School scholarship over the past four years. (We've also heard that the galas are great fun to attend.)

TASTE OF INDIA

The largest single gathering of Asian Indians in our region is Taste of India, an annual celebration that has been held at Old Dominion University's Ted Constant Convocation Center each April since 2007. In that year, a group of local businesspeople, inspired by Richmond's long-standing Festival of India, committed the seed money to establish a similar tradition in Hampton Roads.



The intent was, as explained to us by event co-organizer Vinod Agarwal, to create a great show and provide the regional community with a "taste of India" without having to fly there. In this, Taste of India's organizers have certainly succeeded. The all-day festival features cuisine from area restaurants, shopping opportunities, children's activities and a full schedule of live entertainment, including Indian classical and Bollywood dance performances. A collegiate bhangra competition draws dancers from throughout Virginia and beyond. Around 7,500 people attended Taste of India 2013.

Proceeds from Taste of India have benefited free clinics and other nonprofit organizations in our region, including Children's Hospital of The King's Daughters, the Food Bank of Southeastern Virginia and the Old Dominion University Educational Foundation. This year, a \$5,000 Taste of India/AAPi Scholarship was awarded to Granby High School senior Anne Mugpayo.

Final Comments

Asian Indians in Hampton Roads are distinctive. They are well educated, earn higher-than-average incomes and increasingly wield a modicum of political clout because of their fundraising for political races. As already noted, for the first time, an Asian Indian, Aneesh Chopra from Northern Virginia, ran for a statewide office (lieutenant governor). Chopra was the Commonwealth's secretary of technology and subsequently was appointed as the United States' chief technology officer by President Barack Obama. By contrast, most other Asian American ethnic groups generally have eschewed political activity. Asian Indians, however, understand the corridors of power in the U.S. and now exercise considerable influence in matters political.

Asian Americans sometimes are referred to as the "model" ethnic group in this country. Asian Indians in turn sometimes are labeled the "model group of the model group." The impressive achievements of Asian Indians in Hampton Roads reflect what one member of the regional community aptly characterizes as the "tenacity, flexibility and peaceable nature of Indians, who have been able to adapt and thrive in a foreign country."

True, there is considerable self-selection involved in the representation of Asian Indians we see in Hampton Roads; they are not fully representative of their home country. Even so, their sparkling achievements in Hampton Roads can only be applauded. Their impressive accomplishments vastly exceed their numbers. We are fortunate to have them in our midst.



Virtual Education at the K-12 Level in Hampton Roads



VIRTUAL EDUCATION AT THE K-12 LEVEL IN HAMPTON ROADS

Online learning at the K-12 level has grown from a novelty to a movement.

– Gene V. Glass and Kevin G. Welner, “Online K-12 Schooling in the U.S.:

Uncertain Private Ventures in Need of Public Regulation” (Boulder: National Education Policy Center, 2011)



Online education has received the most attention at the collegiate level. Some MOOCs (massively open online classes) enroll 160,000 or more students. Less attention has been given to online (“virtual”) education at the K-12 level. We do so in this chapter and, in the process, focus on what has been happening in online education in Hampton Roads. **Online education is transforming the experience of public, private and homeschool students alike.**

The number of elementary and secondary students now participating in some kind of formal online education, either full- or part-time, is unknown. All indicators show, however, that their ranks are growing rapidly. A survey by the National Center for Education Statistics (NCES) revealed that 55 percent of all public school districts had students that were enrolled in distance education courses in 2009-10. Almost three-quarters (74 percent) of these districts planned to expand their distance education course offerings within the next three years (see Table 1). A more recent report, “Keeping Pace With K-12 Online & Blended Learning” (2012), estimated that 275,000 U.S. students attended fully online schools in 2012-13; this reflected a 15 percent annual rate of increase over the past several years.¹

Virginia is among those states accelerating the pace of growth. Virtual education has been a centerpiece of Gov. Bob McDonnell’s “Opportunity to Learn” education reform agenda. In April 2010, the governor signed legislation to develop criteria for virtual school programs in Virginia, and 13 such programs were formally approved as “multidivision online providers” the following year. Also in 2011, the Virginia Council for Private Education (VCPE), the body responsible for monitoring private school accreditation in the Commonwealth,

assembled its first list of “state-recognized virtual private schools” (see Table 2).

Beginning with the 2013-14 school year, every Virginia public school student entering the ninth grade will be required to complete at least one online course in order to graduate. Only four other states (Alabama, Florida, Idaho and Michigan) have a comparable online learning requirement.

McDonnell has stated that “the expansion of virtual school programs in Virginia will enable students all across the state to receive the services of highly qualified, Virginia-certified teachers without being limited by classroom walls.”² He and other like-minded reformers note that virtual schools allow students to enroll in specialized courses – such as oceanography or Chinese – that otherwise might not be available to them. The nature of online education encourages participants to work at their own pace, an attractive feature for both high-achieving and special-needs students as well as others who may have struggled in a traditional classroom environment. What’s more, students in Virginia’s most rural localities can access these services as freely as those in the population hubs of Hampton Roads, Richmond or Northern Virginia. From this perspective,

¹ “Keeping Pace With K-12 Online & Blended Learning” (Evergreen Education Group, 2012), p. 5, at: <http://kpk12.com/reports>

² www.education.virginia.gov/News/viewRelease.cfm?id=109

virtual learning potentially represents a revolutionary, democratizing force in K-12 education.

Not all observers are so optimistic. Critics suggest that the promise of virtual learning, particularly at the youngest grade levels, remains largely untested. They point out that virtual learning works well for some students but not for others, and they suggest that not all of the skills and competencies associated with K-12 education are best conveyed online. A further set of concerns has to do with the finances of online education, a lucrative and fast-growing field that is currently dominated by a handful of large, for-profit companies. Initiatives such as Digital Learning Now! (www.digitallearningnow.com) are backed by online learning providers and other software and tech companies that stand to profit

handsomely through the expansion of virtual schooling. Thus, many observers have argued for caution before shifting resources away from traditional teacher-student engagement in bricks-and-mortar classrooms.

Virtual education is a moving target; its "rules" in Virginia and elsewhere are still being written. Thus far, the enthusiasm for online learning has not always been accompanied by a comparable degree of accountability or transparency. Surprisingly little data are available to document the participation or academic performance of Virginia's virtual students. This chapter provides a snapshot of K-12 virtual education in Hampton Roads in 2013, using the best available information at this point.

TABLE 1

DISTANCE EDUCATION COURSES FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOL STUDENTS: 2009-10

Percentage of public school districts with any students enrolled in distance education courses	55%
Of these 55% of public school districts...	
Percentage with students enrolled in distance education courses at the:	
High school level	96%
Middle school level	19%
Elementary school level	6%
Percentage indicating that students who were enrolled in regular high school programs were able to take a full courseload in an academic term using only distance education courses	22%
Percentage indicating that students can fulfill all high school graduation requirements using only distance education courses	12%
Percentage that were planning to expand the number of distance education courses offered in the next three years	74%
Percentage indicating that various entities delivered the distance education courses in which students in their district were enrolled:	
Postsecondary institution in the U.S.	50%
Independent vendor in the U.S.	47%
Online charter school administered by their district	4%

Source: National Center for Education Statistics (November 2011), at: <http://ies.ed.gov/pubsearch/pubsinfo.asp?pubid=2012008>

TABLE 1**DISTANCE EDUCATION COURSES FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOL STUDENTS: 2009-10**

Percentage of public school districts with any students enrolled in distance education courses	55%
Of these 55% of public school districts...	
Percentage indicating that various entities delivered the distance education courses in which students in their district were enrolled:	
Other schools administered by their district	6%
Their district	18%
Another local school district, or schools in another district, in their state	21%
Education service agencies within their state	16%
State virtual school in their state	33%
State virtual school in another state	6%
Districts or schools in other states	3%
Non-U.S.-based public or private entity	1%
Percentage indicating the types of distance education courses taken by students regularly enrolled in their district:	
Advanced placement	29%
Dual enrollment: College-level courses for which students receive both high school and college credits	47%
Credit recovery: Opportunities allowing students to recover course credits from classes they have missed or failed	62%
Career and technical education	27%
Other types of academic courses	65%
Percentage distribution indicating the primary mode of technology for instructional delivery used in distance education courses taken by students regularly enrolled in their district:	
Internet courses using synchronous instruction: Simultaneous or "real-time" instruction	14%
Internet courses using asynchronous instruction: Instruction not occurring in "real-time"	63%
Computer-based technologies other than the Internet: E.g., district network, CD-ROM	5%
Two-way interactive video: Two-way video with two-way audio	17%
One-way prerecorded video	2%

Source: National Center for Education Statistics (November 2011), at: <http://ies.ed.gov/pubsearch/pubsinfo.asp?pubid=2012008>

TABLE 2
STATE-RECOGNIZED VIRTUAL PRIVATE SCHOOLS

School Name/Location/URL	Accreditation	Grades	Approximate annual tuition (high school, full-time)	Owned/operated by
Allied National High School Laguna Hills, CA www.alliedhighschool.com	AdvancED	Grades 9 - 12	\$3,350	Allied Business Schools Inc. (FP, privately held)
EdOptions Online Academy Falls Church, VA www.edoptionsacademy.com	AdvancEd	Grades 7 - 12	not posted	Edmentum Inc. (FP, owned by private equity firm Thoma Bravo, LLC)
Griggs International Academy Berrien Springs, MI www.griggs.edu	AdvancEd	Grades K - 12	\$2,400	Seventh-Day Adventist Church (NFP)
K12 International Academy Herndon, VA www.k12.com/int	AdvancEd	Grades K - 12	\$6,995	K12 Inc. (FP, publicly traded)
Liberty University Online Academy Lynchburg, VA http://libertyonlineacademy.com	AdvancEd	Grades 3 - 12	\$4,950	Liberty University (NFP)
National High School Duluth, GA http://nationalhighschool.com	AdvancEd	Grades 9 - 12	\$199 per month	A unit of Gwinnett, Ga., County Public Schools

Sources: Provider websites and the Virginia Council for Private Education, at: www.vcpe.org

Background And Definitions

The concept of “distance education,” a mode of instruction in which teachers and students are not in the same location, has existed for many years. Written correspondence courses once dominated the field. In the mid-20th century, schools and universities adopted radio and television as a means to transmit lectures and other information to students across long distances. In the 1990s, the Internet dramatically expanded the possibilities of distance education, as the first fully online courses and schools began to coalesce.

The 2012 “Keeping Pace” report defines online learning as “teacher-led education that takes place over the Internet, with the teacher and student separated geographically, using a web-based educational delivery system that includes software to provide a structured learning environment.”³ Online learning courses are further distinguished either by “synchronous” or “asynchronous” methods of student-teacher interaction (or both). Synchronous communication might include online video, telephone calls or other means of interacting in real time. Online courses that include the most synchronous communication generally require teachers and students to interact live at a regular, given time – not unlike traditional classroom sessions or office hours held outside the virtual world.

Asynchronous communication includes email, blogs, posted announcements and online discussion forums. An example of a synchronous method is Old Dominion University’s Teletechnet system, which disseminates live televised courses to students throughout Virginia, the U.S. and around the world. Course providers typically promise a given turnaround time (such as 24 hours) for responding to student or parent inquiries, and for grading and returning student work.

Reviewing Table 1, one can see that there are many different types of providers of K-12 online education. In 2009-10, the greatest proportion of public school districts indicated that their students’ distance learning courses were delivered by “postsecondary institutions.” (Among Hampton Roads universities, Regent University’s Early College Program is a well-established provider of online courses to homeschoolers and upper-level high school students.) The next most influential type of online provider identified in the 2009-10 survey included independent vendors such as K12 Inc. and Connections Academy, the two

largest providers in the United States today. For-profit businesses such as these dominate the marketplace of full-time virtual schools.

A third important category of providers contains state virtual schools, which include institutions such as the large and nationally prominent Florida Virtual School, as well as our own Virtual Virginia. Virtual Virginia is a leading provider of online courses to students enrolled in Hampton Roads’ public schools. Also noteworthy are the numerous public school districts (including, in our region, Virginia Beach, Chesapeake and York County) that have developed their own online courses.

Online course providers offer an extensive menu of full-time and part-time programs to address seemingly all conceivable student needs. For better or worse, virtual learning has become a go-to solution for students who don’t fit neatly in the academic norm. Advanced Placement and dual enrollment courses are an attractive option for high-achieving students, who can enroll as a means of earning early college credit. At the other end of the spectrum, “credit recovery” has become a similarly influential market niche.

Credit recovery courses allow students to make up some or all of the work they didn’t master in a traditional classroom setting – thereby providing an additional path for students to graduate or advance to the next grade level. A tour through virtual school websites shows that homeschoolers seeking additional enrichment as well as student-athletes needing to pass NCAA-approved courses are likewise frequent (and frequently sought-after) consumers of online education. Full-time virtual programs typically require a supervising adult to play the role of “learning coach.” Particularly at the youngest grade levels, this role can be substantive enough to require a parental commitment not unlike that of homeschooling.

Online courses may be accessed in school, out of school, or both. Many online providers tout mobile applications that allow students to access course material nearly anywhere. Some bricks-and-mortar institutions provide computer lab access – or actual computers or tablets – to their students that enroll in virtual courses. Some online courses’ content is entirely electronic; other courses require substantial outside reading, and still others, “off-screen” assignments. Online courses can be used independently, or they can be integrated within a more

³ “Keeping Pace,” p. 7

traditional classroom experience; “blended learning” is the term used to describe this combined approach.

In short, there has been a proliferation of ways that virtual education is redefining the K-12 school experience. We’ll now look more closely at some of the virtual initiatives that are most significant to Hampton Roads students.

Virtual Virginia

Virtual Virginia (www.virtualvirginia.org) is the state’s provider of distance education. Its roots stretch back to the 1980s, when the Department of Education created the Virginia Satellite Education Network (VSEN) as a means of offering Advanced Placement and world language courses to students across the state. The program’s foremost goal was to provide rural and underserved students with courses that otherwise might not have been offered in their districts. Web-based course delivery was added in 2006, leading to the emergence of today’s Virtual Virginia.

The 2012-13 Virtual Virginia catalog lists 65 different courses in the fine arts, language arts, mathematics, social studies and world languages for students at the middle school and high school levels. These courses are available to public, private and homeschool students across the U.S., although Virginia public school students take precedence. Virginia public students enroll through their schools, which are responsible for providing any necessary textbooks and supplies, as well as computer access. Participating schools must arrange for a mentor to proctor tests, provide technical support and serve as a liaison for the student, school and Virtual Virginia. Course fees (which are determined by the Local Composite Index) are covered by the students’ local school divisions; tuition for Virginia private and homeschool students is \$500 per credit.

Virtual Virginia courses are taught asynchronously, with start and end dates that adhere to public school calendars. A program brochure asserts that “all courses are taught by skilled, highly qualified teachers who are fully certified in the subject area and who are experienced in teaching in an online environment. Instructors are available via toll-free phone numbers, e-mail, discussion forums,

and our virtual classroom tools.”⁴ Virtual School Programs coordinator Cheri Kelleher told us that the reach of Virtual Virginia (approximately 7,000 students in 2012-13) has been extended by schools that use the Virtual Virginia learning management system, but provide their own course instructors.

All Hampton Roads school divisions participated in Virtual Virginia during 2011-12; there were 674 course enrollments.

As Table 3 discloses, enrollments were largest in rural divisions like Accomack and York counties and large divisions such as Chesapeake and Virginia Beach. Several of the school divisions we contacted indicated they would welcome more Virtual Virginia course openings for their students. Enrollment is initially capped at 15 students per school per course, with additional slots later made available as space allows.



⁴ Virtual Virginia 2012-13 brochure, at: www.virtualvirginia.org/counselors/Virtual_Virginia_Brochure.pdf

TABLE 3
**VIRTUAL VIRGINIA COURSE ENROLLMENTS AMONG HRETA
SCHOOL DIVISIONS, 2011-12**

Affiliation	Total
Arcadia High	22
Chincoteague High	17
Nandua High	14
Tangier Combined	18
ACCOMACK COUNTY	71
Grassfield High	2
Great Bridge High	31
Greenbrier Middle	1
Hugo A. Owens Middle	3
Hickory High	3
Oscar F. Smith High	13
Western Branch High	3
CHESAPEAKE CITY	56
Franklin City High	8
FRANKLIN CITY	8
Gloucester High	16
Page Middle	0
GLOUCESTER COUNTY	16
Bethel High	3
Kecoughtan High	9
Phoebus High	6
HAMPTON CITY	18
Smithfield High	34
Windsor High	4
ISLE OF WIGHT COUNTY	38
Mathews High	35

TABLE 3
**VIRTUAL VIRGINIA COURSE ENROLLMENTS AMONG HRETA
SCHOOL DIVISIONS, 2011-12**

Affiliation	Total
MATHEWS COUNTY	35
Achievable Dream	4
Heritage High	9
Homer L. Hines Middle	2
J.M. Dozier	1
Menchville High	2
Warwick High	1
Woodside High	3
NEWPORT NEWS CITY	22
Norview High	2
NORFOLK CITY	2
Northampton High	8
NORTHAMPTON COUNTY	8
Poquoson High	44
POQUOSON CITY	44
Churchland High	33
I.C. Norcom High	3
PORTSMOUTH CITY	36
Southampton High	34
SOUTHAMPTON COUNTY	34
King's Fork High	6
Lakeland High	4
SUFFOLK CITY	10
Sussex Central High	1
SUSSEX COUNTY	1
Bayside High	1

TABLE 3**VIRTUAL VIRGINIA COURSE ENROLLMENTS AMONG HRETA
SCHOOL DIVISIONS, 2011-12**

Affiliation	Total
First Colonial High	5
Floyd Kellam High	14
Frank W. Cox High	1
Landstown High	19
Ocean Lakes High	4
Princess Anne High	42
Salem High	1
Tallwood High	1
VIRGINIA BEACH CITY	88
Jamestown High	9
Lafayette High	9
Warhill High	13
WILLIAMSBURG-JAMES CITY	31
Bruton High	32
Grafton High	17
Queens Lake Middle	3
Tabb High	35
Tabb Middle	12
York High	50
York River Academy	2
Yorktown Middle	5
YORK COUNTY	156
HRETA TOTALS	674
Source: WHRO	



WHRO

Hampton Roads' public media affiliate WHRO is a key facilitator of K-12 virtual education in Virginia, beginning with its operation of Virtual Virginia, which it offers by contract with the Department of Education. WHRO is Virginia's only public media affiliate that continues to offer unique educational services in addition to radio and television programming. WHRO is further distinctive in that it is owned and governed by a consortium of 19 public school systems in the Hampton Roads region.⁵ Through WHRO, Hampton Roads teachers and students have access to an exceptionally rich menu of virtual education resources. According to WHRO chief education officer Brian Callahan, these resources played a significant role in Middlesex County's decision to join the consortium (formally known as the Hampton Roads Educational Telecommunications Association, or HRETA) in July of this year.

WHRO, as Table 4 reveals, provides 22 online courses that were developed cooperatively, beginning in 2007, with its owner school divisions. All are aligned to the Virginia Standards of Learning and updated annually.

As described by WHRO, the courses are "textbook independent, rich-media infused and modular in nature to allow for maximum delivery flexibility." Divisions may customize the courses however they see fit – as a resource for independent study, as an online course taught virtually to students in multiple locations or even as a kind of electronic textbook in a traditional classroom.

According to WHRO, 1,396 students from 16 of its owner school divisions participated in a WHRO online course in the 2012-13 school year (although in many cases, the electronic course material was taught through face-to-face instruction or a hybrid/blended approach). One can see in Table 4 that Hampton Roads students took 532 WHRO courses in the summer of 2012. These statistics are likely to grow given the new requirement that all Virginia students entering the ninth grade must complete at least one online course in order to graduate. WHRO courses are freely available to its owner

school divisions, a perk that is unique to the Hampton Roads region. WHRO does, however, offer the courses to other Virginia school divisions for a one-time fee that ranges between \$5,950 and \$17,100 (dependent upon the Commonwealth's Local Composite Index for school funding). In a blunt but persuasive pitch, WHRO marketing materials urge these divisions: "Invest once in your online courses, or spend forever. It's your call."

WHRO provides local educators with two different digital media on-demand services that may be used either in conjunction with online courses, or in traditional classroom settings. Since 2002, WHRO has coordinated an annual group purchase of Discovery Education Streaming (<http://streaming.discoveryeducation.com/>) for all Virginia school divisions; this service offers nearly 50,000 content clips that are correlated to the Standards of Learning. The online learning library eMediaVA (www.emediava.org/) is owned and operated by WHRO; it is free (upon registration) to all Virginia teachers and students, including homeschoilers and those at private schools. eMediaVA is a distribution platform for thousands of "digital learning objects" – self-contained video, audio, interactive and/or graphic elements. It is likewise correlated to the Standards of Learning and can be used for a variety of educational purposes. According to eMediaVA, its content comes from PBS, NPR, NASA, the Smithsonian Museums and "dozens of other nationally recognized sources." WHRO reports more than 685,000 regional views of Discovery Education Streaming in 2011-12. Comparable statistics are not yet available for eMediaVA.

Finally, it is worth noting that WHRO's virtual education initiatives are not limited to K-12 students. WHRO is the state coordinator for Virginia's PBS Teacherline (www.virginiateacherline.org), which offers online professional development courses for teachers, enabling them to earn recertification points (and in some cases, graduate credit at James Madison University). WHRO offers its own professional development courses for teachers as well, including (appropriately) Online Teaching Methodology. In 2011-12, 420 teachers from the HRETA-owner schools registered for an online course through WHRO.

⁵ See the chapter on WHRO in the 2011 State of the Region report, at: www.odu.edu/forecasting/state-region-reports/2011

TABLE 4
WHRO ONLINE COURSE USAGE DATA FOR 16 WHRO OWNER-MEMBER SCHOOL DIVISIONS
Number of students enrolled in each course for summer 2012:

Courses	Virtual	Hybrid/ Blended	Face-to-Face
Algebra I	3		
Algebra II / Trig	2		
Biology	32		
Earth Science	64		
Econ and Personal Finance			
English 9	37	14	
English 10	63	14	
English 11	65		
English 12	77	21	
Geometry	61	36	
Health and PE 9			
Health and PE 10			
Oceanography			
Physics			
Virginia and U.S. Government	2	29	
Virginia and U.S. History	12		
World History II			
TOTALS	418	114	

TABLE 4
WHRO ONLINE COURSE USAGE DATA FOR 16 WHRO OWNER-MEMBER SCHOOL DIVISIONS
Number of students enrolled in each course for school year 2012-13:

Courses	Virtual	Hybrid/ Blended	Face-to-Face
Algebra I		15	101
Algebra II / Trig			35
Biology	1		187
Earth Science	7		
Econ and Personal Finance	80	120	64
English 9		21	72
English 10		9	28
English 11	1		16
English 12	1		30
Geometry			45
Health and PE 9			67
Health and PE 10			90
Oceanography	15		
Physics			125
Virginia and U.S. Government	233	33	
Virginia and U.S. History			
World History II			
TOTALS	338	198	860

Source: WHRO

Multidivision Online Providers

A brief tour through the Virginia Department of Education's (VDOE) website reveals that multidivision online providers have assumed a prominent role in the Commonwealth's initiatives to promote K-12 virtual learning.

The full definition of a "multidivision online provider" may be found at the VDOE website.⁶ In brief, it is a private or nonprofit organization that enters into a contract with a local school board, or with multiple school boards, to provide online courses to K-12 students. A local school board may itself become a multidivision online provider if it offers an online learning program that enrolls a significant number (more than 10 percent) of out-of-district Virginia students.

Table 5 contains a list of the 18 multidivision online providers that were approved in the 2012-13 school year. It is a diverse group of providers, indicating program capacity ranging from 215 to an "unlimited" number of students. All offer high school courses; some offer courses for the middle school and elementary school levels as well. Among the providers are two Virginia school divisions (Chesterfield County and York County), one postsecondary institution (Brigham Young University) and one independent nonprofit organization (The VHS Collaborative). Florida Virtual School is a "private/public alliance" between Pearson, the world's leading education company, and Florida's public schools.

The remaining 14 providers are for-profit businesses of varying types and sizes. Some are privately held or owned by private equity firms; others are publicly traded. Some are a small part of much larger enterprises (most notably Pearson, which owns the Financial Times, Penguin Random House and numerous other publishing imprints and educational services). Most are not just in the business of offering online courses. They or their parent companies may also sell educational software, blended learning objects, digital curricula, interactive simulations, and other kinds of learning tools and services that were

mostly unheard of a generation ago. Virtual learning has become a large and lucrative business, and it is still in a phase of expansion and consolidation. Several providers have changed names and ownership since they were first approved by the VDOE two years ago. (For example: EdOptions was acquired by Plato Learning in November 2011; Plato Learning had itself been acquired by the private equity firm Thoma Bravo in May 2010. A new conglomerate, Edmentum, was created in November 2012.)

The VDOE's full criteria for the approval of multidivision online providers are available online.⁷ All teachers hired by a provider to teach Virginia students must be licensed in Virginia and the student-to-teacher ratio of an online program may not exceed 150:1. Academic standards must meet or exceed the Virginia Standards of Learning. Multidivision online providers must be accredited by one of a short list of recognized agencies; in practice, AdvancEd is the sole accreditor. Tammy McGraw, director of the VDOE Office of Educational Technology, wrote to us that the department requires "documentation regarding accreditation from all providers as part of the Multidivision Online Provider application process. ... We confirm accreditation status as part of our annual monitoring activities and will require documentation again after three years."

In March 2013, we identified an apparent discrepancy in the accreditation of two of the multidivision online providers that were recognized by the Commonwealth for the 2012-13 school year. AdvancEd reported to us that American Virtual Academy (Flipswitch) was no longer accredited. Three online schools owned by Glynlyon Inc. were accredited – but not, apparently, Glynlyon-Odysseyware. The VDOE did not respond to our inquiry about this discrepancy in its accreditation list.

⁶ www.doe.virginia.gov/instruction/virtual_learning/virtual_schools/faq.pdf

⁷ www.doe.virginia.gov/instruction/virtual_learning/virtual_schools/providers/application/criteria_for_multidivision_provider.pdf

On its website, the VDOE maintains a wealth of statistics about the enrollment and performance of Virginia public schools.

No data are currently available, however, on these schools' participation in virtual learning. This gap includes how many students

are taking online courses either full- or part-time, online course pass rates or other measures of academic achievement, or which divisions have contracted with which online providers. Virginia law states: "By July 1, 2011, local school boards shall post on their websites information regarding online courses and programs that are available through the school division."⁸ In practice, however, we found that this information was not comprehensive or easily accessible, or available on many school websites.

Eight of 17 Hampton Roads school divisions responded to our informal survey about their students' participation in virtual learning. All of these school divisions had high school students who were enrolled in online courses; some indicated that a small number of their middle school and elementary school students were enrolled in online courses as well. Virtual Virginia and WHRO were the most frequently cited providers. Most school divisions had contracted with at least one multidivision online provider, although no one provider was clearly dominant throughout the region.



⁸ www.doe.virginia.gov/instruction/virtual_learning/virtual_schools/divisions/division_model_policies_procedures.pdf

TABLE 5
VIRGINIA DEPARTMENT OF EDUCATION-APPROVED MULTIDIVISION ONLINE PROVIDERS LIST, SCHOOL YEAR: 2012-13

Provider/Location/URL	Accreditation	Program Types	Target Population	Program Capacity	Grades Served	Owned/Operated By
Accelerate Education Seattle, WA http://accelerate-ed.com	AdvancEd	Full-time, Supplemental, Fully online, Others	Full-time, Credit recovery, Expanded options	215	K - 12	Accelerate Education Inc. (FP)
Apex Learning Seattle, WA www.apexlearning.com	AdvancEd	Full-time, Supplemental, Fully online, Computer-based instruction, Others	Full-time, Credit recovery, Expanded options, Advance placement	Unlimited	Grades 9 -12	Apex Learning Inc. (FP)
BYU Independent Study Provo, UT http://elearn.byu.edu	AdvancEd	Full-time, Supplemental, Fully online, Computer-based instruction, Others	Full-time, Credit recovery, Expanded options, Advance placement	16,500	Grades 7 -12	Brigham Young University (NFP)
CCPSOnline-Chesterfield County Public Schools Richmond, VA http://ccpsonline.ccpsnet.net	N/A	Full-time, Supplemental	Expanded options	2,000	Grades 9 -12	Chesterfield County Public Schools (NFP)
Cambium Education Inc. (Lincoln National Academy) Frederick, CO http://lna.class.com/	AdvancEd	Full-time, Supplemental, Fully online	Full-time, Credit recovery, Expanded options	Unlimited	Grades 9 -12	Cambium Learning Group Inc. (FP, publicly traded)

Sources: Provider websites and the Virginia Department of Education, at: www.doe.virginia.gov/instruction/virtual_learning/virtual_schools

TABLE 5

VIRGINIA DEPARTMENT OF EDUCATION-APPROVED MULTIDIVISION ONLINE PROVIDERS LIST, SCHOOL YEAR: 2012-13

Provider/Location/URL	Accreditation	Program Types	Target Population	Program Capacity	Grades Served	Owned/Operated By
CompuHigh, LLC Morgantown, WV http://compuhigh.com	AdvanceEd	Full-time, Supplemental, Computer-based instruction	Full-time, Credit recovery, Expanded options, Others	2,000	Grades 8 - 12	Compuhigh, LLC (FP)
Connections Academy, LLC Baltimore, MD http://connectionsacademy.com	AdvancEd	Full-time, Supplemental, Fully online, Others	Full-time, Credit recovery, Expanded options, Advance placement, Others	50,000	PK - 12	Pearson PRC (FP, publicly traded)
E2020 Inc. (renamed Edgenuity in 2013) Scottsdale, AZ http://education2020.com	AdvancEd	Full-time, Supplemental, Fully online, Computer-based instruction, Others	Full-time, Credit recovery, Expanded options, Advance placement	7,500	Grades 6 - 12	Weld North, LLC (private equity firm)
EdOptions Online Academy Falls Church, VA http://edoptionsacademy.com	AdvancEd, VCPE	Full-time, Supplemental, Fully online, Others	Full-time, Credit recovery, Others	5,000	Grades 6 - 12	Edmentum Inc. (FP, owned by private equity firm Thoma Bravo, LLC)

Sources: Provider websites and the Virginia Department of Education, at: www.doe.virginia.gov/instruction/virtual_learning/virtual_schools

TABLE 5

VIRGINIA DEPARTMENT OF EDUCATION-APPROVED MULTIDIVISION ONLINE PROVIDERS LIST, SCHOOL YEAR: 2012-13

Provider/Location/URL	Accreditation	Program Types	Target Population	Program Capacity	Grades Served	Owned/Operated By
EdisonLearning Inc. New York, NY http://edisonlearning.com	AdvancEd	Full-time, Supplemental, Fully online, Computer-based instruction, Others	Full-time, Expanded options	15,000	Grades 9 - 12	EdisonLearning Inc. (FP)
Flipswitch (formerly known as American Virtual Academy) Chandler, AZ http://flipswitch.com/va		Full-time, Supplemental, Fully online, Computer-based instruction	Full-time, Credit recovery, Expanded options	100,000	Grades 6 - 12	
Florida Virtual School Orlando, FL http://flvs.net	AdvancEd	Full-time, Supplemental	Credit recovery, Expanded options, Advance placement	100,000	Grades 6 - 12	"Private/ public alliance" (Pearson / Florida public schools)
Glynlyon-Odysseyware Chandler, AZ http://www.odysseyware.com		Full-time, Supplemental, Fully online, Computer-based instruction	Full-time, Credit recovery, Expanded options	Unlimited	Grades 3 - 12	Glynlyon Inc. (FP)
K12 Virtual Schools, LLC Herndon, VA http://www.k12.com	AdvancEd	Full-time, Supplemental, Fully online, Computer-based instruction, Others	Full-time, Credit recovery, Expanded options, Advance placement, Others	1,221,000	PK - 12	K12 Inc. (FP, publicly traded)

Sources: Provider websites and the Virginia Department of Education, at: www.doe.virginia.gov/instruction/virtual_learning/virtual_schools

TABLE 5

VIRGINIA DEPARTMENT OF EDUCATION-APPROVED MULTIDIVISION ONLINE PROVIDERS LIST, SCHOOL YEAR: 2012-13

Provider/Location/URL	Accreditation	Program Types	Target Population	Program Capacity	Grades Served	Owned/Operated By
Plato Learning Inc. Bloomington, MN http://plato.com	AdvancEd	Full-time, Supplemental, Fully online	Full-time, Credit recovery, Others	5,000	Grades 6 - 12	Edmentum (FP, private equity firm Thoma Bravo, LLC)
Proximity Learning Inc. (mylanguage360) Austin, TX http://mylanguage360.com	AdvancEd	Fully online, Computer-based instruction, Others	Full-time, Credit recovery, Expanded options, Others	Unlimited	Grades 4 - 12	Proximity Learning Inc. (FP)
The VHS Collaborative Maynard, MA http://www.govhs.org	AdvancEd	Supplemental	Expanded options, Advance placement	150,000	Grades 6 - 12	VHS Inc. (NFP)
York County School Division Yorktown VA http://yorkcountyschools.org/virtuallearning	N/A	Fully online	Full-time, Credit recovery	100	Grades 7 - 12	York County Public Schools (NFP)

Sources: Provider websites and the Virginia Department of Education, at: www.doe.virginia.gov/instruction/virtual_learning/virtual_schools

Funding

The initial push to expand online learning in Virginia does not seem to have been accompanied by equally intensive consideration concerning how new full-time virtual schools might best be funded.

The Commonwealth's longstanding school funding formula is based upon students attending bricks-and-mortar institutions in the same communities in which they live. Virginia school divisions are funded in part by their localities, and in part by the state. Standards of Quality establish the minimum funding levels. The state contribution to local school divisions is determined by a mechanism known as the Local Composite Index; the wealthier a community, the less it receives in per-student state funding. **How much, then, should the Commonwealth contribute to a virtual school that is attended by students who reside throughout Virginia, and possibly out of state as well?**

The inequities of the current system are readily apparent in the oft-cited example of Virginia Virtual Academy, a full-time, K-8 virtual school located in Carroll County (southwest Virginia) and operated by multidivision online provider K12 Inc. As one of Virginia's poorer counties, Carroll County receives a comparatively large state subsidy. In 2010-11, the state paid \$5,612 for each Carroll County student, including those at Virtual Virginia Academy, although just four of more than 350 students actually resided in the county. In some cases, the Commonwealth of Virginia paid more than twice as much per student than it would have paid had these students remained at a bricks-and-mortar school in their home communities. Carroll County kept some of the state money, but more flowed back to K12 Inc. Critics complained that scarce public funds were enhancing the bottom line of a company that had most recently claimed a net income of \$21.5 million and also donated generously to Gov. McDonnell's 2009 election campaign and inaugural committee.⁹

The Carroll County example not only raises the issue of how state funds for virtual schools ought to be allocated, but also focuses attention on how much

⁹ Deirdre Fernandes, "System for virtual academy's funding is flawed, critics say," The Virginian-Pilot, Feb. 21, 2011, at: <http://hamptonroads.com/2011/02/system-virtual-virginia-academy-flawed-critics-say>; Lyndsey Layton and Emma Brown, "Virtual schools are multiplying, but some question their educational value," The Washington Post, Nov. 26, 2011, at: http://articles.washingtonpost.com/2011-11-26/local/35283370_1_virtual-schools-virtual-education-support-school-choice

virtual education actually costs. Most observers agree that the day-to-day operation of virtual schools costs significantly less than that of their bricks-and-mortar counterparts. Indeed, cost efficiency is among the frequently touted virtues of virtual learning. Student-teacher ratios are typically much larger and there is no physical building to maintain. On the other hand, the start-up costs necessary to achieve the kinds of economies of scale now enjoyed by a company like K12 Inc. are considerable. Where does this leave us? **One recent report suggests that the price tag of full-time, online education is around 65 percent of that in a bricks-and-mortar classroom.**¹⁰

Throughout the 50 states, no single funding model prevails for virtual education. Many state virtual schools (like Virtual Virginia) are funded through a fixed line-item appropriation. Others are funded in the same manner as physical charter schools, either at the same or a lower level. Enthusiasts of online learning tend to argue that public funds should follow the student, rather than be linked to a particular locality. A few states, such as Florida and Utah, have begun to link virtual school funding to student outcomes (such as the number of courses passed), instead of traditional measures like seat time or average daily membership (ADM). What does seem clear is that funding mechanisms designed for bricks-and-mortar schools do not transfer neatly to the virtual arena. States that support virtual schools must carefully consider how these institutions can be funded fairly.

The General Assembly has taken up this issue every year since 2011, with no clear resolution in sight. **In 2013, Staunton Delegate Dickie Bell proposed to establish a "Virginia State Virtual School" as a statewide school division. The idea was that students anywhere in Virginia could enroll in this division, selecting from any of the approved full-time programs that are offered by the multidivision online providers.** Online providers would no longer need to contract individually with local school divisions, and the new virtual school division "would be funded through transfers of students' state

¹⁰ Christian N. Braunlich, "Students Without Borders: Funding Online Education in Virginia," Thomas Jefferson Institute for Public Policy, November 2011, p. 1, at: www.thomasjeffersoninst.org/files/3/21433%20Virtual%20Booklet.pdf

and local share of the Standards of Quality per-pupil funding, not to exceed \$6,500."¹¹

House Bill 1555 was an attempt to facilitate student access to full-time virtual schools as well as to create a mechanism by which public education funds would "follow the student." It ultimately did not move out of the House Appropriations Committee. Questions about the constitutionality of creating a separate school district hurt the bill's chances, as did concerns about directing public education funds away from already cash-strapped local school divisions.

Anne Wescott, assistant superintendent for policy and education at the VDOE, told us that the proposal would itself require significant fiscal resources to implement. She said that although both the governor and the General Assembly have looked at the issue of virtual school funding for several years, a viable formula has not yet been found: "I think as time goes on and we have more experience with full-time virtual schools, we'll come up with a solution, but we're just not quite there yet."



¹¹ Bacon's Rebellion, Jan. 9, 2013, at: www.baconsrebellion.com/2013/01/thinkingoutsidetheschoolyard.html. See also HB 1555, at: <http://leg1.state.va.us/cgi-bin/legp504.exe?131+ful+HB1555+pdf>

Outcomes

The discussion about funding reflects some of the ambiguity among educational experts, the media and the public at large about the virtues of online schooling. Many Americans outside the education community were unaware of the field's tremendous growth until the fall of 2011, when Mother Jones, The New York Times, The Wall Street Journal, The Nation and The Washington Post all published investigations into the subject, as did the National Education Policy Center at the University of Colorado Boulder.¹² **The authors raised concerns about the quality of many online courses, as well as the degree to which corporate interests had become involved in shaping educational policy. Troubling anecdotes abounded: unsupervised students clicking mindlessly through lessons, or cutting and pasting answers from other sources. Some online teachers reported unmanageable class sizes, or pressure from their employers to pass underperforming students in order to keep course enrollments up and clients satisfied. In too many cases, the practice of K-12 virtual education seemed not to live up to its promise.**

Because the field of K-12 virtual learning is so new, it is largely uncharted territory. This is particularly true of full-time virtual schools. A frequently cited scholarly authority is a 2010 U.S. Department of Education meta-analysis of the many different studies of online learning that were conducted between 1996 and 2008. The somewhat underwhelming main finding of the study? **"Few rigorous research studies of the effectiveness of online learning for K-12 students have been published."** The authors found that

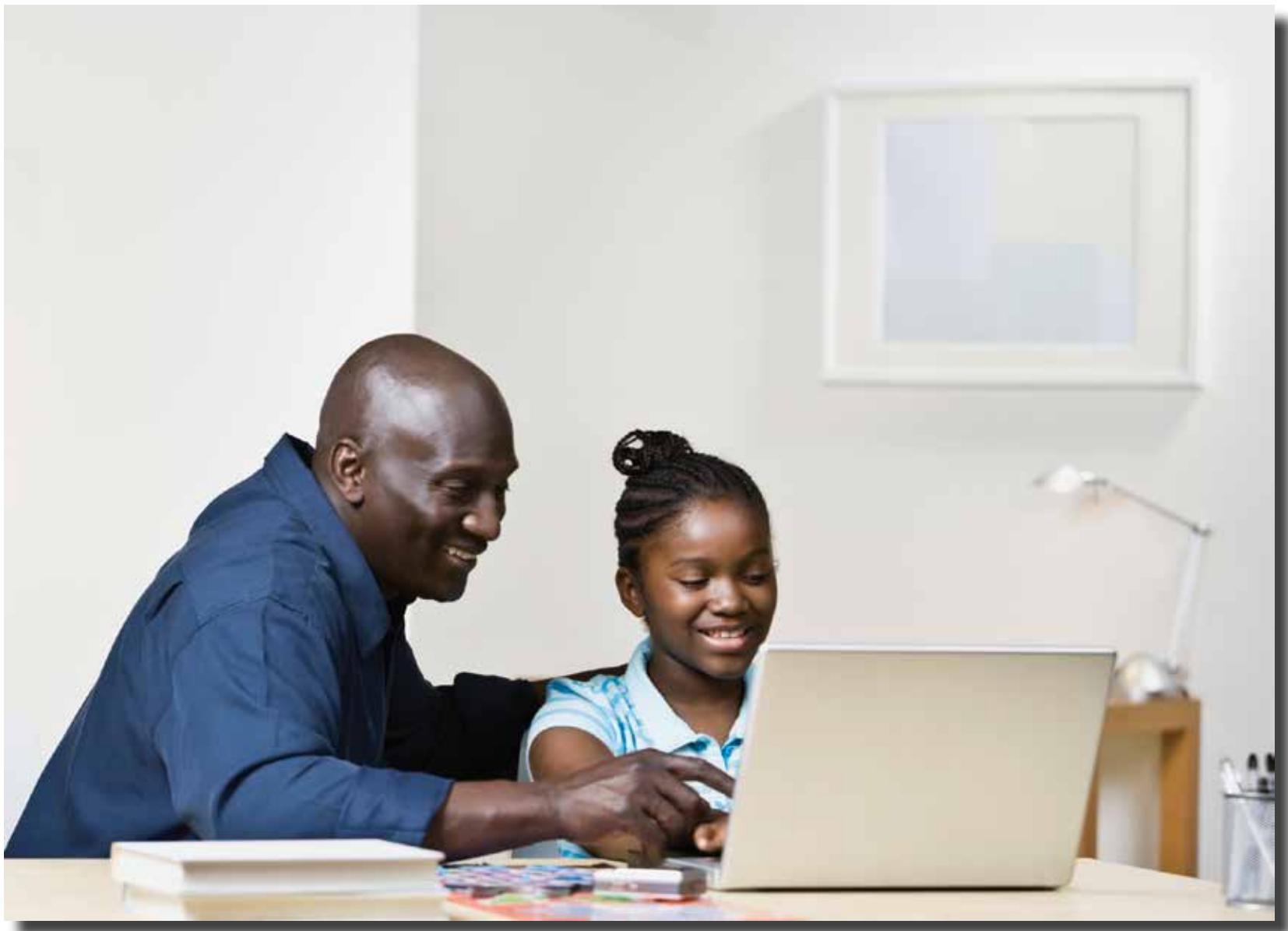
¹² Gene V. Glass and Kevin G. Wehner, "Online K-12 Schooling in the U.S.: Uncertain Private Ventures in Need of Public Regulation" (Boulder: National Education Policy Center, 2011), at: <http://nepc.colorado.edu/publication/onlinek-12-schooling>; Stephanie Mencimer, "Jeb Bush's Cyber Attack on Public Schools," Mother Jones, Oct. 13, 2011, at: <http://www.motherjones.com/politics/2011/10/jeb-bush-digital-learning-public-schools>; Morgan Smith, "Online Educators Gaining Both Classes and Critics," The New York Times, Oct. 14, 2011, at: <http://www.nytimes.com/2011/10/14/us/online-educators-make-inroads-in-public-schools.html>; Stephanie Banchero and Stephanie Simon, "My Teacher is an App," The Wall Street Journal, Nov. 12, 2011, at: <http://online.wsj.com/article/SB10001424052970204358004577030600066250144.html>; Lee Fang, "How Online Learning Companies Bought America's Schools," The Nation, Nov. 16, 2011, at: <http://www.thenation.com/article/164651/how-online-learning-companies-bought-americas-schools>; Lyndsey Layton and Emma Brown, "Virtual schools are multiplying, but some question their educational value," The Washington Post, Nov. 26, 2011, at: http://articles.washingtonpost.com/2011-11-26/local/35283370_1_virtual-schools-virtual-education-support-school-choice; Stephanie Saul, "Profits and Questions at Online Charter Schools," The New York Times, Dec. 12, 2011, at: <http://www.nytimes.com/2011/12/13/education/online-schools-score-better-on-wall-street-than-in-classrooms.html>

"students in online conditions performed modestly better, on average, than those learning the same material through traditional face-to-face instruction," but they also noted that the efficacy of online learning varied substantially across different content and learner types. These conclusions were drawn largely from studies involving undergraduates and older students. The report's executive summary ends with the observation that **"without new random assignment or controlled quasi-experimental studies of the effects of online learning options for K-12 students, policymakers will lack scientific evidence of the effectiveness of these emerging alternatives to face-to-face instruction."¹³**

The K-12 teachers and administrators in our region with whom we communicated were optimistic, but cautious, about the potential of virtual learning. One wrote to us that "elearning has opened doors and provided opportunities for our students to be successful, responsible, and take ownership of their learning through engaging, interactive instruction. It offers an alternative to the traditional educational setting and makes learning possible anywhere, anytime." Others emphasized that online courses were most successful when presented in a blended learning environment. One wrote: "Students at this level do not usually have the self-motivation to complete an online course without some sort of additional monitoring and oversight by a learning coach. ... The use of online content can be very engaging for students. However, it does not begin to replace the value of an effective teacher."

Virtual learning is not a magic bullet, but it is an important resource that can contribute to a strong and well-rounded 21st-century education. As Hampton Roads schools expand their online course offerings, it is critical that they do so in a manner that serves their students' best interests – not merely to trim expenses, or as a means of moving troublesome or special-needs students quickly through the system. Successful online learning initiatives require thoughtful investment, not only in new technologies, but also in curriculum development, teacher training, and student preparation and supervision.

¹³ U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, "Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies" (Washington, D.C., 2010) xiv-xviii, at: <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>



Mental Health Care in Hampton Roads: “Streeting,” Guns and Budgets



MENTAL HEALTH CARE IN HAMPTON ROADS: “STREETING,” GUNS AND BUDGETS

Most mentally ill people are not violent. Instead, they are troubled individuals who for many different reasons find it difficult to cope with the challenges of day-to-day living. However, tragic events such as those that occurred at Virginia Tech and Newtown, Conn., underline the reality that some mentally ill individuals can become violent. When they do so, the results can be catastrophic.

In the wake of these tragedies, related national and state discussions over possible gun control legislation have pushed mental illness to the forefront. Many of those who oppose comprehensive gun control legislation nonetheless opine that keeping guns out of the hands of the mentally ill should be a very high societal priority.

Hence, it is appropriate to revisit how the Commonwealth of Virginia and Hampton Roads deal with people who have mental illnesses and their access to guns.

Background

Approximately 200 mentally ill individuals were returned to the streets of Virginia in 2010, even though there was agreement among mental health professionals that they needed to be hospitalized. In the view of these professionals, either these individuals were sick enough to harm themselves or others, or they were unable to defend themselves. This is referred to as the “streeting” of individuals with mental illness; it occurs when either there is no space for mentally ill people in public facilities, or no private facility will take them. Some find the term streeting to be offensive, but it is commonly used by professionals.

Streeting occurs throughout the Commonwealth, but “appears most prevalent in Hampton Roads – where eight of nine Community Services Boards (CSBs) acknowledge streeting last year,” according to the Office of the Inspector General of the Department of Behavioral Health and Developmental Services (DBHDS).

This disturbing finding, along with others, has caused us to return for a look at mental health services in Hampton Roads; we did so previously in the 2008 State of the Region report. The relevant chapter in that report was titled, “An Almost Invisible Corner: Care for the Mentally Ill in Hampton Roads.” In it, we reported a general lack of understanding of the needs and concerns of the mentally ill in Hampton Roads.

It’s worth noting that in 2008, we were advised that regardless of what people say, they really don’t want to talk about mental illness. Thus, we were advised to steer clear of the topic. We revisit the topic in this report because events over the past several years continue to highlight the seriousness of mental illness and its impact on both individuals and the community at large.

How Common Is Mental Illness?

Nationally recognized studies cited by the U.S. Center for Mental Health Services estimate that a range of 3 percent to 5 percent of adults are likely to suffer a serious mental illness in their lifetime. Using the recommended estimate of 3.9 percent of the adult population, we can estimate the prevalence of serious mental illness in Hampton Roads' major jurisdictions. Table 1 and Graph 1 do so for adults, while Table 2 provides similar data for children and adolescents. The data are reported by CSBs, which are explained in greater detail in a subsequent section.

The numbers are not small. Fully 48,326 people in Hampton Roads have a serious mental illness (SMI), if one adopts the 3.9 percent definition favored by the U.S. Center for Mental Health Services. This large number necessarily influences discussions concerning ways to reduce violence and gun-related incidents involving mentally ill individuals. No matter what policies are proposed, the sheer difficulty in monitoring the behavior of nearly 50,000 people is immense.

Note also that potentially problematic mental health circumstances are believed to be more common among children and adolescents – between 5 percent and 11 percent of this population, depending on the level of functioning.



TABLE 1
**PREVALENCE OF SERIOUS MENTAL ILLNESS (SMI) IN THE ADULT POPULATION IN HEALTH PLANNING
REGION 5 (HAMPTON ROADS) BY COMMUNITY SERVICES BOARD**

CSB	City	Total Population	Adult Population	Adults with SMI 3.9%	Lower Limit of SMI 3%	Upper Limit of SMI 5%
Chesapeake CSB	Chesapeake	222,209	164,688	6,423	4,941	8,234
Colonial Behavioral Health	James City County	67,909	52,624	2,052	1,579	2,631
	York County	65,464	48,188	1,879	1,446	2,409
	Poquoson	12,150	9,181	358	275	459
	Williamsburg	14,068	12,831	500	385	642
Hampton-Newport News CSB	Hampton	137,436	106,162	4,140	3,185	5,308
	Newport News	180,719	136,806	5,335	4,104	6,840
Norfolk CSB	Norfolk	242,805	192,191	7,495	5,766	9,610
Portsmouth Department of Behavioral Healthcare Services	Portsmouth	95,535	72,869	2,842	2,186	3,643
Virginia Beach CSB	Virginia Beach	437,994	332,745	12,977	9,982	16,637
Western Tidewater CSB	Isle of Wight County	35,270	27,239	1,062	817	1,362
	Southampton County	18,570	14,652	571	440	733
	Franklin	8,582	6,536	255	196	327
	Suffolk	84,585	62,488	2,437	1,875	3,124

Sources: Population 2010, U.S. Census Bureau; Serious Mental Illness estimates, SAMHSA, Center for Behavioral Health Statistics and Quality, 2012

GRAPH 1

**ESTIMATED PREVALENCE OF SERIOUS EMOTIONAL DISTURBANCE (SED) AMONG ADULTS
IN HEALTH PLANNING REGION 5 (HAMPTON ROADS) BY COMMUNITY SERVICES BOARD**

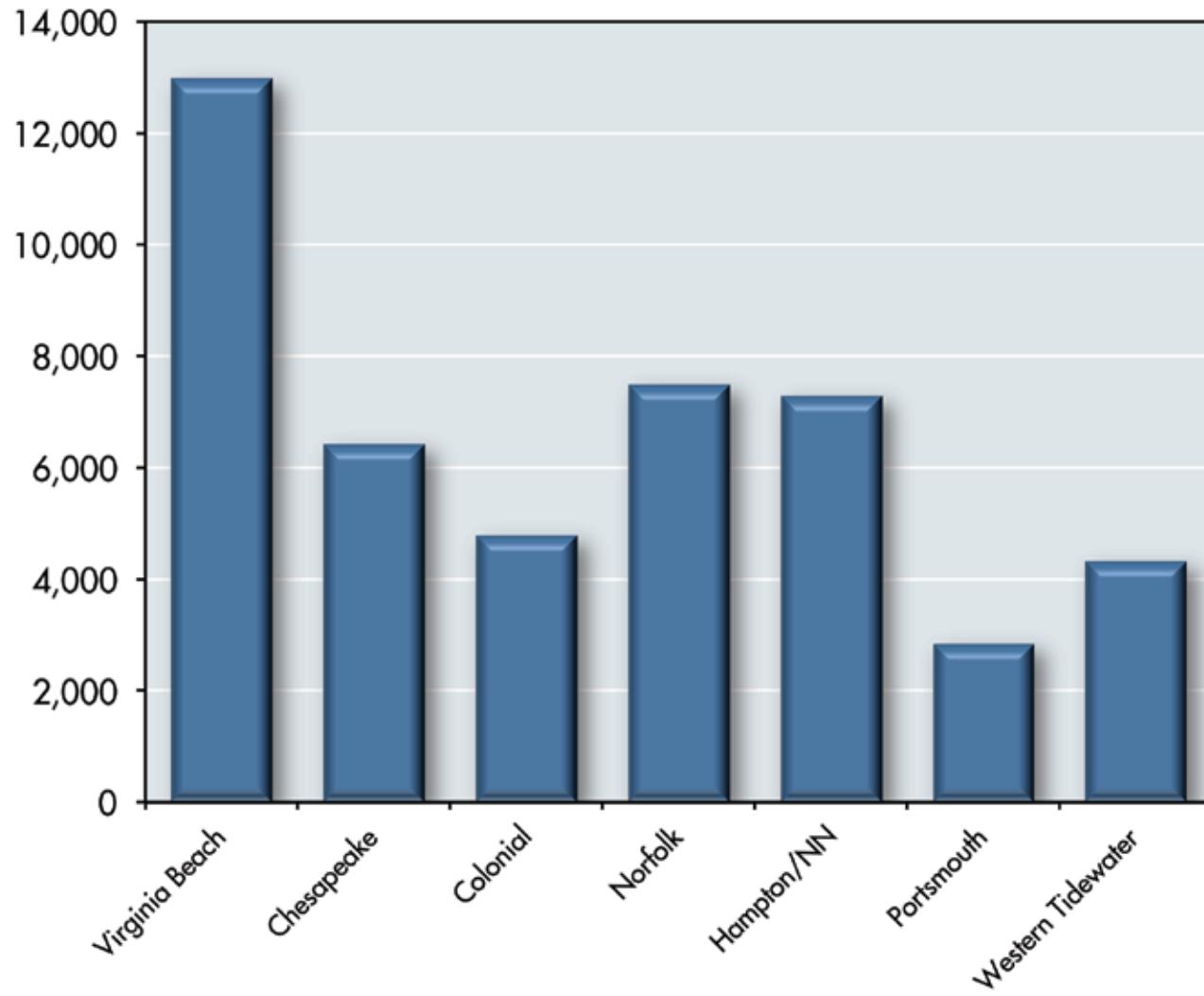


TABLE 2
**ESTIMATED PREVALENCE OF CHILD/ADOLESCENT
 SERIOUS EMOTIONAL DISTURBANCE (SED)
 IN HEALTH PLANNING REGION 5 (HAMPTON ROADS)
 BY COMMUNITY SERVICES BOARD**

	Population Age 9 - 17	Estimated SED Level of Functioning		Estimated SED Level of Functioning	
		GAF Score < 50		GAF Score < 60	
		Lower	Upper	Lower	Upper
Chesapeake	30,188	1,509	2,113	2,717	3,321
Colonial	20,425	1,021	1,430	1,838	2,247
Hampton- Newport News	38,370	1,919	2,686	3,453	4,221
Norfolk	26,228	1,311	1,836	2,360	2,885
Portsmouth	10,630	532	744	957	1,169
Virginia Beach	52,949	2,647	3,706	4,765	5,824
Western Tidewater	18,205	910	1,274	1,638	2,003

Source: VDBHDS, Comprehensive State Plan, 2012-2018, December 2011. SED = Severe Emotional Disturbance. The GAF score emanates from the Global Assessment of Functioning Scale, which varies between 0 and 100; lower scores for an individual indicate more severe mental health disturbances. GAF scores below 50 typically are associated with greater problems and levels of need. Lower and upper-bound estimates of the number of individuals below 50 and 60 are provided.

What Happens To Those Deemed Mentally Ill?

As a result of the tragic event at Virginia Tech on April 16, 2007, much attention was paid in the immediate aftermath to the adequacy of mental health services in the Commonwealth. The Code of Virginia was amended. Now, if there is evidence that a substantial likelihood exists that an individual in the near future is a danger to self or others due to mental illness, or is substantially unable to care for himself due to mental illness, then legal action to secure an emergency custody order can be taken to ensure safety until a thorough assessment of dangerousness can be completed and a temporary detention order can be issued within six hours if warranted.

**However, between April 1, 2010, and March 31, 2011,
 approximately 200 people in the Commonwealth met
 the criteria for a Temporary Detention Order (TDO), but
 nonetheless were released from custody because no psychiatric
 facility was available or willing to admit them. This means that
 a physician or clinical psychologist found that each of these
 individuals had a substantial risk of causing harm to himself/
 herself or to others, or that he/she was unable to defend
 himself/herself, but they were nonetheless put out on the
 streets.** The Office of the Inspector General (OIG) of the Commonwealth's Department of Behavioral Health and Developmental Services observed that:

"... to deny individuals an opportunity to receive the level of care deemed clinically and legally necessary places each person at risk not only at the time of the immediate crisis, but may create subsequent avoidable risk for the person, their family and the community. Streeting represents a failure of the Commonwealth's public safety sector safety net system to serve Virginia's most vulnerable citizens and places these individuals, their families, and the public at-risk" (OIG Semi-Annual Report, Oct. 1, 2010, to March 31, 2011).

The OIG findings raised such a high level of concern that a subsequent 90-day study was conducted. In that study, the term streeting was replaced with "failed temporary detention order." During the study, 72 people that mental health professionals found met the criteria for a temporary detention order nonetheless received less intensive treatment than the hospitalization that was clinically indicated; 273 cases resulted in the issuance of a temporary detention order beyond a six-hour time limit. **Hampton Roads led Virginia with 99 of the 345 instances statewide of failing to comply with the letter of the law in meeting the needs of the mentally ill (OIG Review of Emergency Services, Report No. 206-11, Feb. 28, 2012).**

The finding of failed temporary detention orders, or streeting, is not intended to be a criticism of the professionals who work in the system. Instead, it is a reflection on the system itself and the failure on the part of all levels of government to fund an adequate level of facilities and services. There is every reason to believe that those working in the system do the best they can given the limited options, programs and services with which they have to work.

TABLE 3 SURVEY OF THE HOMELESS IN SOUTH HAMPTON ROADS: POINT IN TIME COUNT, 2012						
Category	Western Tidewater	Norfolk	Chesapeake	Portsmouth	Virginia Beach	Totals
Homeless Persons						1,424
Sheltered	30	510	27	154	349	1,070
Unsheltered	7	56	22	178	91	354
Severely Mentally Ill						128
Sheltered	1	57	0	11	21	90
Unsheltered	0	0	0	15	23	38

THE HOMELESS AND MENTAL ILLNESS

Streeting is only one of several concerns about the treatment of the mentally ill in our region. A point-in-time survey of the homeless in South Hampton Roads was undertaken in 2012; it found significant numbers of people who were deemed to be severely mentally ill. **Of the 1,424 people interviewed as part of the survey of the homeless (conducted by local officials as part of a U.S. Department of Housing and Urban Development requirement), 128, or 8.9 percent, were found to be severely mentally ill (see Table 3).** This percentage actually is below that reported by the Substance Abuse and Mental Health Services Administration (SAMHSA), which found that about 30 percent of people who are chronically homeless have mental health conditions.

JAILS AND MENTAL ILLNESS

The Virginia Compensation Board is required by law to complete a survey of the 64 local and regional jails and jail farms in the Commonwealth to determine the number of inmates with mental illness. In July 2012, there were 26,669 inmates in the Average Daily Population of the jails; 28 percent of them were in Hampton Roads, and 86 percent were males.

Of these inmates, 39 percent of the females and 21 percent of the males were reported to be mentally ill in 2012. Table 4 reports the mental illnesses of individuals in jails in Hampton Roads. Note that 1,487 were judged mentally ill (20 percent of the inmate population). Table 5 provides a snapshot of 2,964 mentally ill inmates in July 2012. More than 500 of them were charged with violent crimes and more than 1,000 with felonies.

There are three major lessons to be drawn here. First, significant proportions of those in jail are deemed mentally ill. Second, many who are imprisoned have committed violent crimes. Third, because the definition and identification of mental illness are not rigidly standardized, the numbers presented here should be regarded as approximations.

Nonetheless, the historic traditions of putting the mentally ill in jail and/or charging them with crimes apparently still hold true.

TABLE 4

MENTAL ILLNESS IN JAILS IN HAMPTON ROADS, 2012

Jail Location	Schizophrenia or Delusional	Bipolar or Major Depressive	Mild Depression	Anxiety Disorders	PTSD	Other Mental Illnesses	Mentally Ill with No Diagnosis	Total Mental Illness Population	Total Jail Population	Percentage Mentally Ill
Southampton County	2	0	2	2	1	1	0	9	95	9.5%
Va Peninsula	8	14	0	1	1	15	2	43	400	10.8%
HR Regional	108	85	0	17	14	106	12	392	892	43.9%
Chesapeake City	107	134	0	46	0	0	0	347	1,141	30.4%
Western Tidewater	17	15	0	4	2	0	0	45	654	6.9%
Hampton City	8	18	0	7	1	6	0	51	414	12.3%
Newport News City	15	25	9	6	0	20	0	75	515	14.6%
Norfolk City	48	30	0	2	5	66	13	164	1,419	11.6%
Portsmouth City	8	4	6	0	2	0	0	20	408	4.9%
Virginia Beach City	94	177	0	0	12	11	0	341	1,442	23.6%
Total Hampton Roads	415	502	17	85	38	225	27	1	7	20.1%
Statewide	1,056	1,663	697	540	324	973	545	6,322	26,669	23.7%
HR	39%	30%	2%	16%	12%	23%	5%	24%	28%	27.7

Source: Compensation Board Report: 2012 Mental Illness in Jails Report, Nov. 1, 2012

What offenses did these mentally ill individuals commit, or what were they charged with committing? Table 5 reports this.

More than 1,000 of the mentally ill people in Hampton Roads jails are being held on felony charges; over 500 are listed as

violent. The following table indicates the offenses for which mentally ill people were being held in Hampton Roads jails in July of last year.

Jail	Felony	Misdemeanor	Drugs	Violent	Non-Violent
Southampton County	9	0	1	3	5
Va Regional	45	8	4	16	33
HR Regional	328	42	35	222	113
Chesapeake City	276	85	110	102	149
Western Tidewater	33	3	6	20	10
Hampton City	41	32	19	15	39
Newport News City	47	26	14	23	36
Norfolk City	112	54	16	70	80
Portsmouth City	8	12	2	5	13
Virginia Beach City	264	57	52	85	184
Total Hampton Roads	1	319	259	561	662
Statewide	4,351	1,424	1,058	1,792	2,925
HR	27%	22%	24%	31%	23%

Source: Compensation Board Report: 2012 Mental Illness in Jails Report, Nov. 1, 2012

RESIDENTIAL LIVING AND THE MENTALLY ILL

It would be a mistake, however, to conclude that most mentally ill people are warehoused in our prisons. Table 6 discloses that 82 percent of those officially deemed mentally ill lived in residences in 2012. Only 16 percent of those not living in private residences were in jail or detention centers, while 9 percent were homeless.

TABLE 6

TYPES OF RESIDENCE FOR INDIVIDUALS RECEIVING CSB MENTAL HEALTH SERVICES IN VIRGINIA: FY 2012

Total Individuals	113,552			
Private Residences	92,663	81.6%		
Non-private Residences	20,889	18.4%		
Community Placements			10,279	49%
Jails and Prisons			2,484	12%
Juvenile Detention Centers			855	4%
Inpatient Beds and Nursing Homes			682	3%
Other Institutions			256	1%
Homeless or Homeless Shelters			1,910	9%
Unknown or Not Collected			4,423	21%

Note: Community placements are in boarding homes, foster homes, licensed adult living facilities or community residential programs.
Source: Virginia Department of Behavioral Health and Developmental Services, Fiscal Year 2012 Annual Report, Dec. 1, 2012

WAITING FOR TREATMENT

There can be a waiting list of services for those who have been diagnosed with a mental illness and for whom treatment in a public facility or program is appropriate. Table 7 provides statistics by Community Services Boards in Hampton Roads with respect to the numbers of people they served between January and April 2011, the number and percentage of those who suffer serious mental illness, and the waiting lists for their services.

Table 8 provides the same information for children served by CSBs, the number and percentage with a serious emotional disorder, and the number who were on their waiting lists for the same time period.

TABLE 7

ADULT INDIVIDUALS WITH SERIOUS MENTAL ILLNESS SERVED OR ON WAITING LISTS BY CSBS IN HAMPTON ROADS: JANUARY THROUGH APRIL 2011

CSB	Adult SMI Prevalence	Number Served	Number with SMI	Percent with SMI	Waiting List
Chesapeake	6,423	1,297	555	43%	58
Colonial	4,784	1,769	678	38%	66
Hampton	9,476	5,488	2,447	45%	14
Norfolk	7,495	2,633	1,781	68%	89
Portsmouth	2,842	1,303	833	64%	0
Virginia Beach	12,977	2,226	1,563	70%	159
Western Tidewater	4,324	874	698	80%	26
Total Hampton Roads	48,321	15,590	8,555	55%	412
Total Virginia	239,747	76,630	45,963	60%	4,017

Note: SMI represents the number of people with serious mental illness.
Source: Department of Behavioral Health and Developmental Services

TABLE 8

**CHILDREN WITH SERIOUS EMOTIONAL DISORDERS SERVED
BY CSBS ON WAITING LISTS IN HAMPTON ROADS:
JANUARY THROUGH APRIL 2011**

CSB	SED Prevalence	Number Served	Number with SED	Percent with SED	Waiting List
Chesapeake	2,113	228	82	36	0
Colonial	1,430	556	266	48	3
Hampton	2,686	2,720	2,379	87	0
Norfolk	1,836	460	173	38	0
Portsmouth	744	35	33	94	0
Virginia Beach	3,706	415	252	61	22
Western Tidewater	1,274	523	324	62	28
Total Hampton Roads	13,789	4,937	3,509	71	53
Total Virginia	66,094	31,262	20,251	65	1,699

Source: Department of Behavioral Health and Developmental Services

GUNS AND THE MENTALLY ILL

The elementary school massacre in Newtown, Conn., quickly provoked passionate national debate concerning restrictions on gun ownership and use. Proposals immediately surfaced to reduce the sale of assault rifles, diminish the size of magazine clips holding additional cartridges, expand background checks, and review and perhaps overhaul mental health policies and protocols.

Ours is not to conduct analysis and discussion here of the need for gun control legislation (many aspects of which apparently are supported by large majorities of the American public), but rather to examine the extent to which laws and regulations might keep guns out of the hands of those who are mentally ill. Virtually all participants in the debate believe this would be a good thing.

Here are a few things to consider. First, relatively few mentally ill people are overtly violent, but those that are can commit horrible crimes. Second, very few of the individuals who have used guns or bombs to murder multiple people were identified ahead of time either as being dangerously mentally ill, or sufficiently worrisome pre-tragedy that they should be denied the right to purchase a gun. Third, if one relies upon the U.S. Center for Mental Health Services definition of serious mental illness, then we have 48,326 people with serious mental illnesses in Hampton Roads. Because the Commonwealth no longer institutionalizes most mentally ill people, it is almost a Sisyphean task for any combination of responsible authorities to monitor successfully the behavior of 48,326 individuals. Fourth, a very high proportion of murders are committed by people using a hand gun, such as a 9 mm semi-automatic. These weapons now are rather easily acquired in states such as Virginia because of our relatively lax gun laws. It matters not whether one is mentally ill. Guns, it seems, are readily available in Virginia – too readily available, many would say.

All things considered, given current laws and conditions, it is difficult to keep guns out of the hands of dangerously mentally ill individuals. True, a national system of identity checks could prevent the direct sale of a gun to a dangerously mentally ill person, but the Commonwealth's lax gun laws mean that he or she often has the ability to acquire desired guns by other means. More potentially dangerous mentally ill people could be institutionalized, in which case their behavior would be more easily tracked, but the Commonwealth has steadily moved away from this model to the community-based treatment of the mentally ill. More people could be identified as dangerously mentally ill by appropriately qualified professionals in many different venues (work, schools, police, social welfare agencies, churches, etc.), but then how would they be treated and monitored, and who would pay for this?

Our analysis is a bit discouraging. If we are to keep guns out of the hands of dangerously mentally ill people, then we need national gun control legislation that at a minimum includes a national system of identity checks. We also need to narrow the differences between the laws of the various states, for example, Virginia versus Maryland. Further, we must change how we treat the mentally ill. Streeting, for example, must

come to an end, but this will not occur unless we are willing to fund mental health treatment more generously.

Nothing is forever; our circumstances can and do change. Currently, however, a degree of pessimism is merited with respect to our ability to keep guns out of the hands of the mentally ill in the Commonwealth of Virginia.

Mental Health Services Delivery In Virginia

Although mental illness is generally recognized today as a sickness from which one can suffer, its treatment usually follows a different path than is true for physical illnesses. When an individual gets physically sick, he or she visits a private physician and then might be referred to an outpatient provider or hospital for treatment. Some who are mentally ill follow such a route. The majority, however, are treated by a public provider of services.

Community Services Boards are the keystones of the public provision of mental health services in Virginia. There are 39 CSBs and one closely related behavioral health authority that provide mental health services directly to Virginians, or do so via contracts with private providers. Seven CSBs (see Table 9) exist in Hampton Roads, which is almost co-terminus with the Commonwealth's State Health Planning Region 5.

In addition to listing the jurisdictions covered by the CSBs, Table 9 indicates the classification of the CSB in terms of its legal relationship with its local government. While CSBs are agents of the local governments that established them, most CSBs are not city or county government departments. The classifications as defined in the Code of Virginia are:

- **Operating community services board:** They directly provide mental health, developmental and substance abuse services. These boards employ their own staff, but are not city or county government departments.

- **Administrative policy community services board:** Services are provided through local government staff or through contracts with other organizations and providers.

- **Policy-advisory community services board:** Portsmouth has the only such CSB in Virginia. This board provides advice to the city of Portsmouth, but does not have operational powers or duties. The city provides its own services through its own employees.

Community Services Boards are operational partners with the Virginia Department of Behavioral Health and Developmental Services and the statewide system of services established under the department. The department operates eight state hospitals that provide treatment for mental illnesses. Eastern State Hospital in Williamsburg is the nearest facility providing care in Hampton Roads.

While CSBs are the principal providers of publicly funded mental health services, there are many private providers that deliver their services for private payment or reimbursement from a public source. The Department of Behavioral Health and Developmental Services has granted licenses to more than 750 providers that deliver more than 1,800 services at 6,000-plus locations in the Commonwealth.

In FY 2012, 222,823 people received services in the publicly operated behavioral health and developmental services system. Of that number, 113,552 (50.9 percent) received CSB mental health services, but only 4,742 (2.1 percent) received treatment in state hospitals. Progressively, Virginia has backed away from the notion of maintaining state facilities for the mentally ill.

TABLE 9

COMMUNITY SERVICES BOARDS IN HAMPTON ROADS

Community Services Board	Type	Population	Area	Density	Communities Served
Chesapeake CSB	Administrative Policy	225,898	340.7	663	Chesapeake
Colonial Behavioral	Operating	161,343	272.6	592	James City, York, Poquoson and Williamsburg
Hampton-Newport News CSB	Operating	318,399	120.1	2,651	Hampton and Newport News
Norfolk CSB	Administrative Policy	243,985	53.8	4,535	Norfolk
Portsmouth Department of Behavioral Healthcare Services	Policy-Advisory	96,368	33.1	2,911	Portsmouth
Virginia Beach CSB	Administrative Policy	441,246	248.3	1,777	Virginia Beach
Western Tidewater CSB	Operating	148,543	1,324.00	112	Isle of Wight, Southampton and Franklin
Total HR		1,635,782	2392.6	683.7	
Statewide		8,096,613	39,598.40	204	

Note: Health Planning Region 5 also includes the Eastern Shore CSB and the Middle Peninsula-Northern Neck CSB.

Funding Mental Health Services

Mental health programs are funded by an interesting and highly variable combination of federal, state and local revenues, as well as from fees paid by individuals or insurance programs. Funding sources vary considerably among programs, primarily because of differing contributions of local governmental units. Table 10 examines the funding of CSBs in Hampton Roads. The percentage contribution by local governments varies from a high of 27.4 percent in Virginia Beach to a low of 2.7 percent in Western Tidewater (see Graph 2). The Hampton-Newport News CSB, though it handles a smaller population than the comparable CSB in Virginia Beach, nonetheless spends more on mental health activities than Virginia Beach.

Across the state, the comparable percentages vary from a high of 69.6 percent in Fairfax County to a low of 1.1 percent in Cumberland. The statewide average for local government funding is 23.2 percent.

A National Alliance on Mental Illness report, "State Mental Health Cuts: The Continuing Crisis" (November 2011), summarized Virginia's support of mental health programs as follows:

- In FY 2009, Virginia spent \$93.81 per capita compared to the national average of \$122.90.**
- Virginia's budget for mental health declined from \$424.3 million in FY 2009 to \$386.6 million in FY 2012 – a reduction of \$37.7 million, or 8.9 percent. This was the 11th-largest percentage reduction among the states.**
- It is fair to say that the funding of mental health programs has not been one of the highest priorities either of the General Assembly or local governmental units.**

TABLE 10

COMMUNITY SERVICES BOARD BUDGETS IN HAMPTON ROADS, FY 2012

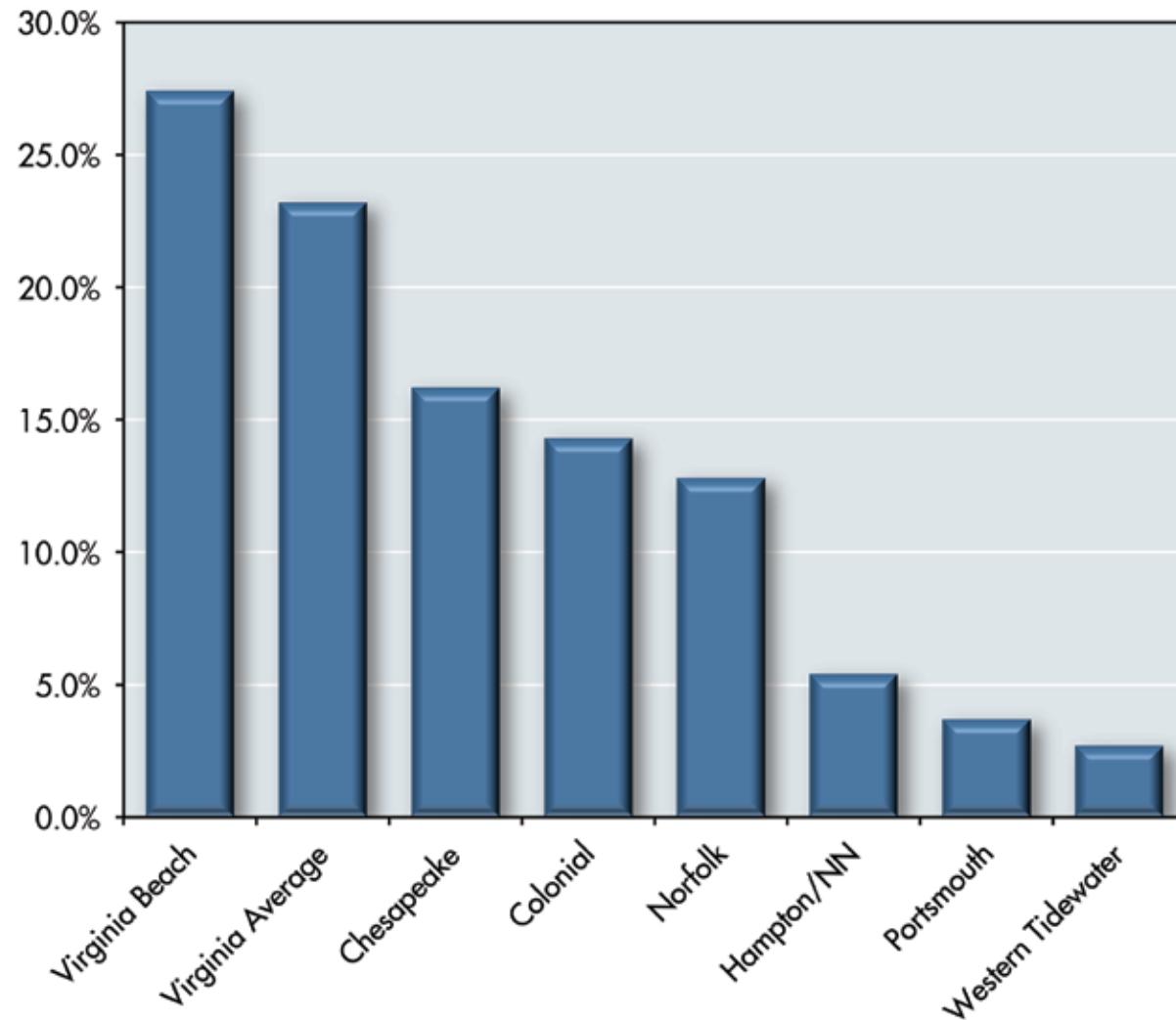
CSB Jurisdiction	CSB Total Revenue	Local Contribution	Percent Local Funding	Statewide Rank
Virginia Beach	\$47,195,182	\$12,951,660	27.4	9
Chesapeake	\$14,224,926	\$2,310,655	16.2	10
Colonial	\$12,893,797	\$1,849,431	14.3	11
Norfolk	\$22,315,243	\$2,851,000	12.8	12
Hampton	\$60,003,891	\$3,214,183	5.4	16
Portsmouth	\$9,827,419	\$365,988	3.7	21
Western Tidewater	\$19,908,447	\$545,599	2.7	27
All 40 CSBs	\$1,011,690,630	\$234,286,454	23.2	

Notes: Total CSB revenue is for all programs including mental health, substance abuse and developmental delay. Local revenue represents the contribution by local government.

Ranks represent the percentage contributed by local governments compared to all other Virginia CSB jurisdictions.

GRAPH 2

PERCENTAGE OF COMMUNITY SERVICES BOARD REVENUE SUPPLIED BY LOCAL GOVERNMENTS, FY 2012



Quality Considerations

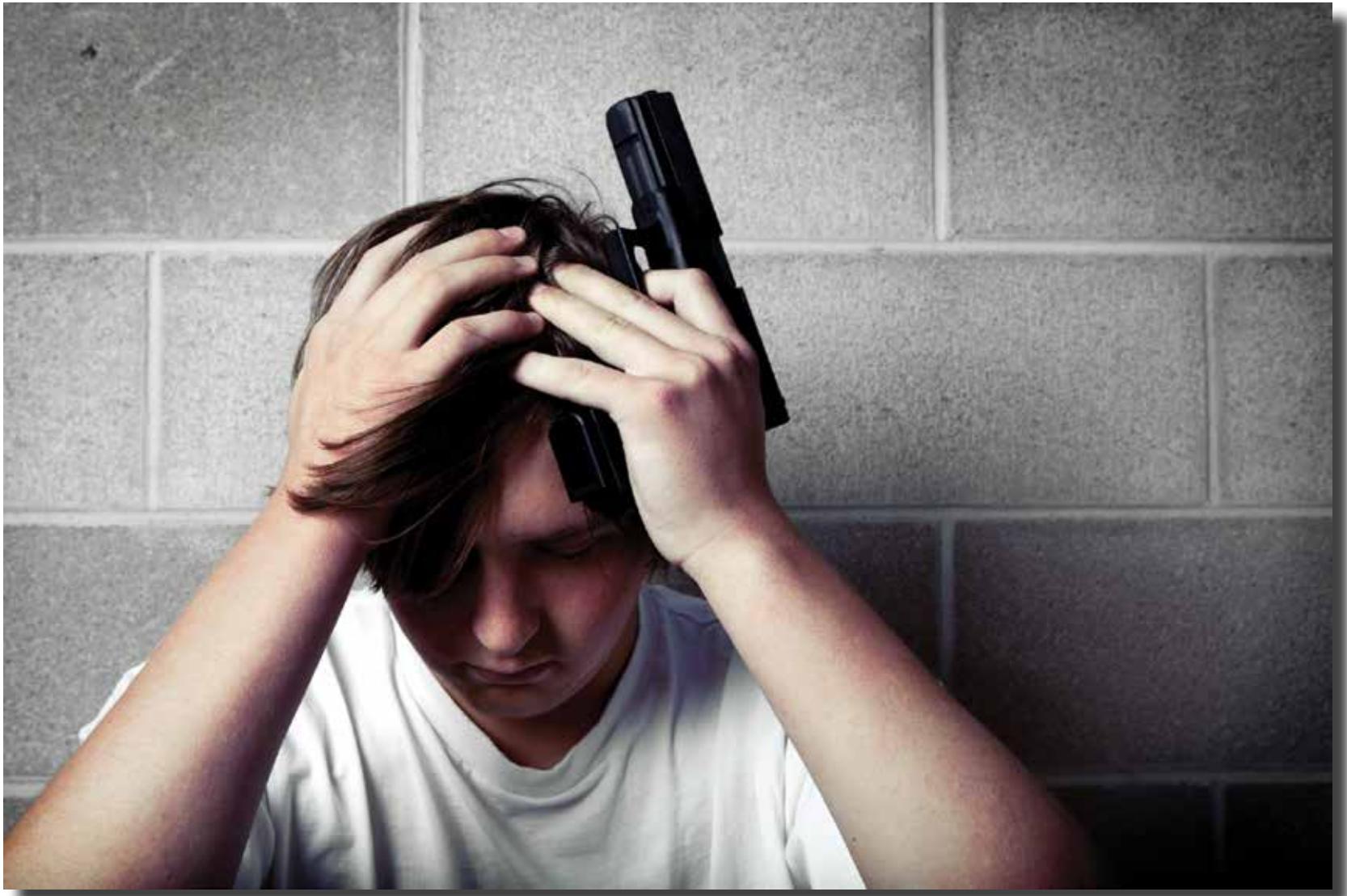
Mental health problems, behavior, treatments and outcomes all are complex in nature. Thus, it is not easy to pin down outcome-oriented measures of Community Services Board activities. In other people-oriented government programs, outcome measures such as a participant's successful exit from a program, skills or degrees acquired, employment gained, income earned, taxes paid, criminal records, etc., often are used to imply success or failure. For the most part, those measures are not available or appropriate where CSBs are concerned.

The Commonwealth's Department of Behavioral Health and Developmental Services has established a vision statement that can be used as a benchmark against which its work can be evaluated. The board's Policy 1036 asserts:

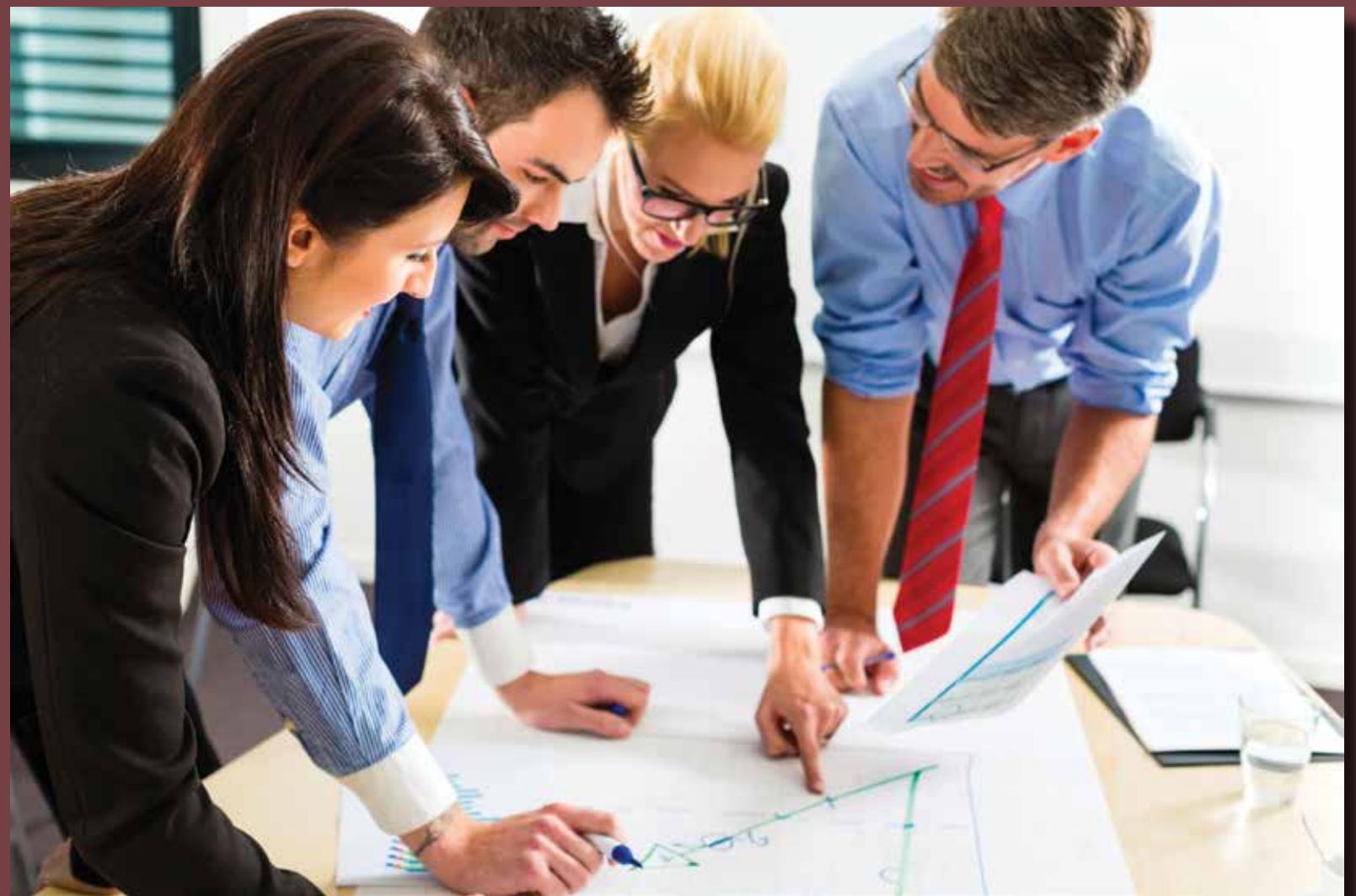
"Our vision is of a system of services and supports driven by individuals receiving services that promotes self-determination, empowerment, recovery, resilience, health, and the highest possible level of participation by individuals receiving services in all aspects of community life, including work, school, family and other meaningful relationships. This vision shall include the principles of inclusion, participation, and partnership."

Accordingly, the department has developed a set of measures around which the provision of mental health services quality should be measured. However, these indicators reflect primarily whether or not the CSBs actually provided services to individuals deemed mentally ill and the amount and intensity of the treatment they received. The measures really do not constitute conventional outcome-oriented indicators of mental health treatment that many might associate with success. This is not to say that the CSBs aren't successful. Instead, this suggests that it is very difficult to define realistic CSB outcomes that both are measurable and comparable to other state agencies.

One cannot know the counterfactual circumstances connected to mental health treatment – what would have happened had not the Community Services Boards provided their services. Intuitively, one feels the CSBs are doing vital work that is essential to the operation of a civil, humane society. Even so, it is difficult to develop numbers that demonstrate this is so and, as we have seen, impossible to assert that our systems will effectively keep weapons out of the hands of mentally ill people.



OK, Now What Should We Do?



OK, NOW WHAT SHOULD WE DO? IS IT RICHARD FLORIDA'S "CREATIVE CLASSES" OR INSTEAD "BACK TO BASICS" THAT SHOULD GUIDE OUR REGIONAL ECONOMIC GROWTH?

A

pproximately 45 percent of the economic activity in Hampton Roads is dependent on defense spending. Beginning with the first State of the Region report in 2001, we have pointed out that our region is exceptionally vulnerable to any reductions in defense spending, or changes in the mix of that spending.

Among our defense spending vulnerabilities during this decade are:

- the loss of one or more carrier battle groups now homeported here;
- reduced ship construction and repair activity in Newport News, Norfolk and Portsmouth;
- the loss of air wing squadrons now sited at Oceana Naval Air Station; and
- a continued decline in the number of active-duty military personnel posted in Hampton Roads.

Any one of these developments would constitute bad news; the fear that one or more might transpire has infused new energy into regional economic development discussions. These discussions usually devolve to a simple question: How can we stimulate our regional economy so that it grows faster and creates more jobs?

This is an important question and often references other regions. Why have the economies of metropolitan areas such as Austin, Texas, and Raleigh-Durham, N.C., grown so much more rapidly than regions such as Rockford, Ill., and Flint, Mich.? The traditional answer to this question has been straightforward. Austin and Raleigh-Durham have grown more rapidly than Rockford and Flint because they have superior "human capital" (in education attainment and skills training),

more abundant technology, enhanced infrastructures, more productive labor relations and more intelligent tax and regulatory policies.

It is easy to understand this view of economic development – regions that attract and retain more smart and talented people, foster technological change, invest in supportive infrastructure such as transportation, avoid excessive increases in labor costs and pursue intelligent tax and regulatory policies grow faster than those that don't.

The major problem with this traditional view of economic development is that it does not promise regions a quick fix. Decades of conscientious investments in education, technology and infrastructure are required to move a region to the economic forefront. It takes many years to improve an urban school system, increase the flow of patentable innovations, plan and build new bridges and tunnels, cultivate productive labor relations and optimize the nature of taxes and regulations. The economic dynamism of Austin and Raleigh-Durham did not appear overnight, and Rockford and Flint did not fall into their economic holes in a single year, or even a single decade.

There are, however, other views on how regions can spur their economic development; none has received more attention than the collection of ideas propagated by Richard Florida, who may be the uncrowned king of regional economic development gurus. Based on the huge number of books Florida has sold and his sought-after status as a speaker, he has had more influence on

regional economic development strategies than anyone else since the turn of the century.

Over the past 15 years, Florida, who now is based at the University of Toronto and also is a senior editor at The Atlantic magazine, has put forward a set of highly seductive and provocative hypotheses about the sources of regional economic growth. The core of his ideas is set forth in "The Rise of the Creative Class" (2002), "Cities and the Creative Class" (2005), "The Flight of the Creative Class" (2005) and "Who's Your City?" (2008).

Florida argues that economic growth today is powered by human creativity. Hence, metropolitan areas that prosper are those able to attract and retain the highest proportions of the members of the "creative class" – scientists and engineers, to be sure, but also architects, artists, musicians, actors and perhaps even a few economists. What is the common thread among these people? They are knowledge workers who share a common spirit embodying individuality, merit, diversity, openness, tolerance and, of course, creativity.

Florida contends that:

- The creative class is moving away from traditional corporate communities to what he terms "Creative Class Centers."
- Creative Class Centers not only have high concentrations of creative people, but because of them, also host many innovative, technologically advanced industries that exhibit high rates of growth.
- Creative Class Centers prosper more because of the creative people who want to live there and less because of economic development incentives offered by cities, regions and states.

- Members of the creative class favor communities with abundant high-quality amenities and experiences, those that value diversity and those that allow creative class members to pursue their own individual identities. The major magnet for the members of the creative class, then, is not this week's listing of job vacancies, but instead environments that are eclectic and diverse, visibly tolerant and open to new ideas.

Florida puts it this way:

"Regional economic growth is powered by creative people, who prefer places that are diverse, tolerant and open to new ideas. Diversity increases the odds that a place will attract different types of creative people with different skill sets and ideas. Places with diverse mixes of creative people are more likely to generate new combinations. Furthermore, diversity and concentrations work together to speed the flow of knowledge. Greater and more diverse concentrations of creative capital [in turn] lead to higher rates of innovation, high-technology business formation, job generation and economic growth." ("The Rise of the Creative Class," p. 249)

These hypotheses are easily understood and without question have proven to be magnetic. Anyone who attends the meetings of regional leadership organizations in Hampton Roads has heard individuals advocate some or all of Richard Florida's ideas. Independent of the empirical validity of his hypotheses, it appears that many of those who lead organizations, select stories, write editorials, teach classes, give sermons and steer public opinion genuinely would like those hypotheses to be true. Florida's recipe for economic development represents the way many would prefer the world to operate. A little less Adam Smith and a little more Richard Florida.

A Bit More Detail About Richard Florida's Ideas

Florida and the traditional economic development proponents agree on several points. Both believe that human capital in the form of accumulated workforce education and training is important. Florida, however, innovates by subdividing human capital into three categories he asserts are especially critical for economic development: "Bohemians," gays, and immigrants/foreign born.

Florida's Bohemians are writers, designers, musicians, actors, directors, painters, sculptors, photographers and dancers. His "gay" designation includes lesbians, gays, bisexuals and transgender individuals. Immigrants/foreign born are those classified as such by the U.S. Census.

According to Florida, the higher the percentages of Bohemians, gays, and immigrants/foreign born individuals in a region's population, the more conducive that region's climate is to generating economic growth. He

argues that environments that are open, tolerant, diverse, eclectic and distinctive are hothouses for economic growth; his classifications of human capital provide indexes to represent those characteristics.

Because the Census did not have a Bohemians classification nor did it record individuals' sexual orientation in either 2000 or 2010, Florida created his own indexes for these variables. Table 1 reports the indexes that Florida developed

for Hampton Roads and several other metropolitan regions for 2010. For example, among 361 metropolitan regions, Florida ranked Hampton Roads 100th in terms of its proportion of creative class employment, 107th in terms of its technology, 100th in terms of its talent, but only a dismal 244th in terms of tolerance. The tolerance ranking presumably reflects the percentages of Bohemians, gays and immigrants/foreign born in the population of Hampton Roads, although Florida does not disclose precisely how the index was constructed.

Metro Area	Rank Among 361 Metro Areas	Percent Creative Class Employees	Creativity Index	Technology Index Rank	Tolerance Index Rank
Durham	1	48.4%	.953	8	45
Washington, D.C.	3	46.8%	.947	27	30
Charlottesville	13	39.7%	.826	58	19
Baltimore	21	37.7%	.837	55	103
Raleigh/Cary	24	37.6%	.887	6	95
Richmond	47	34.9%	.692	99	191
Charlotte	70	30.6%	.736	88	130
Hampton Roads	100	31.9%	.586	107	244
Charleston	137	30.4%	.533	194	178
Jacksonville	139	30.4%	.645	134	115

Source: Richard Florida, "The Rise of the Creative Class Revisited" (New York: Basic Books, 2011), Tables A.1 and A.2

How Well Do Florida's Hypotheses Explain And Predict Regional Economic Development Differentials?

Prima facie, Florida's hypotheses are a bit suspect from the outset because quite a few discordant counterexamples exist. Consider New Orleans, whose economic development deficiencies were exposed for all to see by Hurricane Katrina in 2005. By Florida's standards, New Orleans should have been a wellspring for economic development, as it is famously tolerant of a variety of living styles, is highly diverse and sports numerous eclectic artistic and musical venues. Unfortunately, other factors are more important and, in the case of New Orleans, among the most important of these are its citizens' educational attainment and labor force participation. In 2000 (prior to Katrina), only 74.7 percent of the residents of New Orleans had completed high school, compared to 80.4 percent nationally. The labor force participation rate for those ages 16 or older in New Orleans was only 57.8 percent, compared to 63.9 percent nationally. Not surprisingly, this combination was influential in producing a 2000 median household income in New Orleans of \$27,133 – only 64.6 percent of the national average of \$41,994 (all data from the 2000 U.S. Census). The bottom line is that New Orleans' diversity, tolerance and eclectic surroundings did not come close to overcoming the burdens imposed by its shortcomings in traditional economic areas. New Orleans may have "Power of Place," as Florida puts it, but that is overwhelmed by traditional economic verities.

Contrast New Orleans to Salt Lake City, whose majority Mormon population has long advocated and legislated strong views on acceptable social behavior. Further, Salt Lake City is not as demographically diverse as New Orleans. Nevertheless, according to the U.S. Census Bureau's America FactFinder, 83.4 percent of the citizens in Salt Lake City have completed high school, 68.4 percent of those 16 or older are in the labor force and median household income was \$36,944 in 2000 (all data from the 2000 U.S. Census). Salt Lake City exhibits comparatively little of what Florida emphasizes, but its economy nonetheless has performed much better than New Orleans.

Nevertheless, Florida's ideas are de rigueur among many elected officials and economic development professionals. The entire state of Michigan, for example, proclaimed that it is going to become "cool" by following Florida's ideas.

Given the amount of attention Florida's hypotheses have received and their apparent popularity among opinion leaders, it is surprising that rigorous statistical tests of those hypotheses are few in number. Perhaps the most frequently cited is Harvard economist Edward Glaeser's review of "The Rise of the Creative Class"; one can find this review in *Regional Science and Urban Economics* (35[5], 2005). Glaeser examined 242 metropolitan statistical areas and found strikingly little statistical connection between several of Florida's human capital diversity variables and population growth between 1990 and 2000. Curious economists at Old Dominion University, anxious to put a finger on the real sources of regional economic growth, have replicated Glaeser's study, looking at per capita income and jobs.

Even though rigorous empirical evidence in favor of Florida's hypotheses is lacking, there's no disagreement that simple correlations exist between his three distinctive measures of human capital and measures of economic welfare such as growth rates in population, median household income and per capita income. Bohemianism and per capita income, for example, track each other in most metropolitan economies.

Alas, correlation does not imply causation. The critical question, therefore, is whether there is a causal relationship between Florida's three distinctive measures of human capital and indexes of economic development. Researchers such as Glaeser have demonstrated that the correlations decline dramatically or disappear when conventional measures of human capital, such as educational attainment, are also taken into account. That is, it is factors such as educational attainment that are most important to economic development, not Bohemianism as such. To the extent that Bohemians are better educated than the average person, measures of Bohemianism will be positively correlated with measures such as population and income growth. But, it is not the living styles of Bohemians that are critical to economic growth; it is their educational attainment.



Florida's ideas also have been attacked from a different angle. In his "The Flight of the Creative Class" (2005), Florida downplayed the economic challenges of countries such as India and China because the percentage of creative class citizens in these countries continues to be relatively small. However, it is obvious that these countries have dynamic, rapidly growing economies – for reasons other than those trumpeted by Florida. Thus, the world is more complicated than it is portrayed in Florida's fertile thinking, which is based primarily on bivariate correlations between variables.

Once one has controlled for factors such as educational attainment, there isn't any reliable, rigorous empirical evidence that increasing the proportion of Bohemians, gays or immigrants in a region's population will attract more people, generate more jobs or result in higher incomes. Thus, if all of Hampton Roads were to mirror Norfolk's slightly Bohemian Ghent district, then this by itself would not produce more jobs and higher incomes unless the "Ghentization of Hampton Roads" also were accompanied by the other traditional essentials of economic development – attracting and retaining more smart and talented people, fostering technological change, investing in supportive infrastructure such as transportation, and pursuing intelligent labor, tax and regulatory policies. **In other words, well-educated, innovative Bohemians are valuable in the context of economic development; lowly educated Bohemians without technological savvy are not.**

If Not Richard Florida, Then What?

If Richard Florida's interesting hypotheses don't hold much empirical water, then how can Hampton Roads position itself better to stimulate its economic growth rate? The answers are straightforward, though perhaps disappointingly conventional to some.

INVEST IN K-12 EDUCATION

Mediocre, low-performing schools with high dropout rates are a recipe for economic stagnancy. As Table 2 reveals, Hampton Roads merits only a mixed grade in this regard. Only three of 13 regional public school districts reported four-year, on-time graduation rates that exceeded the Commonwealth average of 88 percent in 2012. Further, only five of our 13 public school districts boasted high school dropout rates below Virginia's average of 6.5 percent in 2012.

At the other end of the spectrum, when The Washington Post recently constructed a list of the 500 "most challenging" public high schools in the country, 34 of the schools on the list could be found in Virginia. However, 32 of the select 34 are located in Northern Virginia. Only Princess Anne High School in Virginia Beach (248th) and Bruton High School in Williamsburg (498th) made the list from Hampton Roads. (See http://www.washingtonpost.com/local/education/abcs-of-americas-most-challenging-high-schools/2013/04/11/ca4f27aa-a2fb-11e2-82bc-511538ae90a4_story.html.)

Add to this picture the indifferent overall performance by the region's students on objective examinations such as the Scholastic Aptitude Test and the presence of several schools in the region that the Commonwealth has designated as "failing."

It will suffice to observe that viewed collectively, the region's public K-12 schools are not the economic development spark plugs that they usually are in rapidly growing areas of the country. We enjoy genuine pockets of K-12 excellence, yet at the same time are hampered by many underperforming districts and schools. Improving our overall K-12 performance must be one of our highest regional economic development priorities. This will not be easy to accomplish

and will require: (1) more generous funding; (2) increasing the proportion of educational budgets devoted to instruction rather than administration; (3) a willingness to reallocate educational resources when necessary, including closing under-enrolled schools; and (4) providing visible incentives to school districts, teachers and administrators to do things differently and improve their students' performances. We will touch on several aspects of these challenges below.

Hampton Roads typically has not performed as well as many other comparable metropolitan regions in terms of new companies started per capita, patents received and innovations commercialized. The Milken Institute and the Kauffman Foundation both publish indexes that reveal that our region lags in terms of new business formation and entrepreneurial activity. The Commonwealth of Virginia usually fares well in such comparisons, but this reflects activity in Northern Virginia, not Hampton Roads.



TABLE 2

ON-TIME PUBLIC HIGH SCHOOL COMPLETION AND DROPOUT RATES FOR VIRGINIA AND HAMPTON ROADS, 2012

On-time Public High School Completion Rates	Dropout Rates
Virginia	88.6%
Male	85.5%
Female	90.6%
White	90.8%
Black	82.7%
Asian	94.8%
Hispanic	80.9%
Chesapeake	91.2%
Franklin	78.8%
Hampton	84.4%
Isle of Wight	87.0%
Newport News	82.8%
Norfolk	77.0%
Poquoson	94.1%
Portsmouth	80.8%
Suffolk	84.1%
Surry	83.8%
Virginia Beach	86.8%
Williamsburg/James City	88.7%
York	94.2%

Source: State-Level and District-Level Reports, Four-Year Completion and Dropout Rates, 2012, www.doe.virginia.gov

Our lagging business startup and patent performance are functions of: (1) a long-term lack of funding for engineering, science and medical research; (2) our inability to commercialize research and development being generated at the region's federal laboratories; and (3) the relatively low proportions of high school and college graduates we generate regionally in STEM (science, technology, engineering and mathematics) disciplines.

The proposed regional Governor's School for Innovation and Entrepreneurship represents a way to begin to reverse the entrepreneurial aspects of this problem, though we must recognize it represents a long-term solution. College-level entrepreneurial instruction and support also offer some promise; however, it is difficult to teach someone to become an entrepreneur. We probably would obtain superior results from making it easier for those who are naturally inclined to become entrepreneurs to do so.

Some contend that our region's relatively modest performance in terms of objective measures of K-12 educational performance is the result of inadequate funding. However, the region's financial support of K-12 education actually increased significantly between 2001 and 2011. **On a per pupil basis, public school K-12 funding in Hampton Roads increased about 60 percent during this time period – and was still about 40 percent higher after taking price inflation into account.** If a funding problem exists in our region, then it primarily relates to capital expenditures. Virtually every city within the region continues to utilize school buildings and facilities that either urgently need refurbishing, or should be torn down and replaced with new construction.

In an earlier chapter ("Where Our Cities and Counties Spend Their Money"), we report data showing that the typical school district in Hampton Roads reduced the proportion of its budget devoted to instruction by 2.15 percent over the past decade. In some cities (Hampton and Virginia Beach), the decreases were much larger than this. While it is true that effective administration and administrators are essential to educational performance, it's also true that more generous funding of K-12

public education may have a reduced impact on student performance if the increased expenditures are devoted to administration rather than instruction.

Further, lurking in the background of funding and resource allocation discussions of K-12 public education in Hampton Roads is the phenomenon of declining school enrollments. **Over the past decade, five of the region's seven largest cities experienced declining enrollments, according to the Commonwealth (see Table 3), and total enrollment in the seven cities declined 3.5 percent even while enrollment statewide was increasing 9.19 percent.**

In theory, declining enrollment should free up resources for reallocation, but this is not easy to do because many K-12 public education costs are fixed in the short run due to teacher tenure obligations and legal constraints. Thus, it does not follow that if enrollment at an elementary school declines by 5 percent, one can diminish expenses at that school by the same percentage. For example, it's virtually impossible to reduce the appointment of a required school counselor by 5 percent. Similarly, one either offers a German course, or one does not. It's not possible to offer only three-quarters of a German course because enrollment has fallen 25 percent.

Significant enrollment-related cost savings usually accrue when entire schools are closed or specialized curricula are abandoned. School closings are political dynamite, however (as Mayor Rahm Emanuel has found in Chicago), and superintendents shy away from confronting unhappy parents strongly opposed to the closure of their neighborhood school. Empirical evidence and logic often account for little in such situations.

Even so, intelligent use of scarce resources demands that our school districts reverse the regional trend toward increased expenditures on administration rather than instruction; this means that we must shutter some neighborhood schools. Easier said than done, of course. But we must support school officials when their closure decisions are evidence-based and transparent. School boards and city councils must be willing to take the heat that surely will follow.

Citizens of goodwill in our region must keep their eyes on the long-term prize – better-educated K-12 students, more vigorous economic development and a higher quality of life. It is not a path for the timid.

Hence, not only do we need to continue to provide increased funding for K-12 education in Hampton Roads, we also must be smarter in the use of those funds. One of our regional education goals ought to be to increase the proportion of funding spent on instruction and research and to diminish the proportion of funding spent on general and administrative support. Over the years, public school districts in Hampton Roads have tended to spend increasing proportions of their budgets on what in a business context is called A&O – administrative and overhead expenses. The same dollar cannot be spent two places, and so this has diminished the proportion of their budgets devoted to instruction. There are some legitimate reasons for climbing A&O expenditures, such as new and increased state and federal regulatory and legal requirements. Nevertheless, our school districts need to progress in this arena and to reward administrators who are able to retard the growth of A&O expenses. The road to K-12 educational heaven is not paved with administrative slots.

TABLE 3

APM ENROLLMENTS IN THE SEVEN LARGEST PUBLIC SCHOOL DISTRICTS IN HAMPTON ROADS, 2001-2002 AND 2011-2012

	Commonwealth Average Pupil Maintenance (APM)		
State/City	2001-2002	2011-2012	Percent Change
Virginia	1,147,239	1,252,039	9.19%
Chesapeake	38,271	39,525	3.28%
Hampton	22,396	21,406	-4.42%
Newport News	31,592	29,664	-6.10%
Norfolk	34,792	33,000	-4.96%
Portsmouth	17,036	15,192	-10.82%
Suffolk	12,031	14,397	19.67%
Virginia Beach	75,090	69,856	-6.97%

Note: Average Pupil Maintenance is the Commonwealth's equivalent of size of a school district in terms of students in attendance.
Source: Superintendent's Annual Reports for 2001-02 and 2011-12, http://www.doe.virginia.gov/statistics_reports/supts_annual_report/2011_12/index.shtml

INCREASE BOTH PUBLIC AND PRIVATE SUPPORT FOR THE REGION'S THREE COMMUNITY COLLEGES

High-quality occupational and technical training programs are among the golden building blocks of economic development. Tidewater Community College, Thomas Nelson Community College and Paul D. Camp Community College provide the most important means for us to achieve the goal of increased economic development, and the tuition cost per credit hour at these institutions is about one-third of the comparable cost to a student of a credit hour at a four-year public university. An important regional economic development objective ought to be to support short-course, certificate and associate degree programs that are closely attuned to job markets, as well as apprenticeships and internships that are jointly sponsored and funded by public and private sources.

By the middle of this decade, it should no longer be true that we hear employers lament that they are unable to hire the nurses, welders, die makers, computer-assisted manufacturing specialists, occupational therapists, and database and cloud administrators that they say they need, but cannot find. Our three community colleges possess the immediate ability to address labor market shortages, upgrade the talents of existing workers and provide many students with a superbly cost-effective way to begin their collegiate careers. We should develop and use them in much the same fashion that Germany utilizes its *Fachhochschulen* – technical colleges and institutes that are tightly connected to job markets and practical applications of science and technology.

The private sector must be a vital part of this refocusing of our efforts. In Europe, private-sector apprenticeships, often partially supported by government and often including post-high school-level academic training, produce a continuing stream of skilled workers who, after two to four years of on-the-job training at firms such as Mercedes-Benz, move into permanent, attractive jobs there. Once again, Germany provides an interesting model. There, about two-thirds of students who complete their formal high school-level academic training undertake an apprenticeship; Mercedes-Benz alone sponsors 2,000 apprentices a year.

Unfortunately, apprenticeships in the United States are tinged with bad memories of indentured servitude, even though modern European apprenticeships are in no way connected to that notion. Apprenticeships may not be flashy, but they work.

Here's where the rubber meets the road – choices must be made. In the view of most outsiders, it would be far more productive for Hampton Roads cities and counties collectively to provide tax incentives for firms to support apprenticeships than for the cities and counties to invest tens of millions of dollars in arenas, convention centers and performance venues whose net economic impact not only is highly questionable, but also probably self-canceling when multiple cities do the same thing.

IMPROVE AND RATIONALIZE THE REGION'S TRANSPORTATION INFRASTRUCTURE

We are, some say, located at the end of the longest cul de sac in the United States. This adage confers a certain distinction upon Hampton Roads, but not one that is advantageous. Yes, the new transportation funding program adopted jointly in spring 2013 by the Commonwealth and the region averted looming disaster, yet did not come close to accomplishing what is necessary to spur regional economic development because the benefits are accompanied by substantial costs.

The three most important legs underpinning our regional economic stool are defense spending, the port and tourism. The viability of each depends upon the existence of a high-quality, well-designed transportation system that is capable of moving both people and products efficiently and, in case of emergency, moving hundreds of thousands of citizens out of the region to safety.

The soon-to-be-implemented toll system (which The Virginian-Pilot once dubbed "a ring of fire") virtually encourages regional firms to relocate outside the ring of tolls – that is, closer to Richmond or points south. After all, why should one locate a business in, say, Hampton or Virginia Beach, if moving product from those cities not only will be handicapped by congestion, but also will require the paying of tolls for the privilege of facing that congestion?



Simply put, we haven't made sufficient progress in addressing our regional transportation needs. As a consequence, each of our economic "big three" will not contribute as much as they could to our future economic success; this also means that major "where to locate" decisions (including very important ones made by the Department of Defense) are less likely to be resolved in our favor in the future. We court disaster if we do not pay attention to the signals we are receiving from our major employers concerning our transportation system.

An intelligent approach to the regional transportation challenges facing us must include: (1) the use of technology to guide traffic and avoid congestion; (2) increased use of mass transportation; (3) a third crossing; (4) moderate tolls; and (5) a larger, dedicated, non-toll revenue stream to support these developments. "Mass transportation" here especially includes increased reliance on buses, which, despite popular notions to the contrary, ordinarily are more cost-effective than light rail and frequently just as environmentally kind per passenger mile.

The optimal solution also includes expansion of The Tide if (and this is an absolutely critical if) The Tide were to connect major traffic generators in the region, including Naval Base Norfolk, Old Dominion University and perhaps Norfolk International Airport.

International Airport. Let's be candid, however. Even if these first two high-traffic nodes were connected, this version of The Tide still would require massive subsidies per passenger, perhaps approaching 80 percent of operating costs. Nevertheless, this could be a reasonable undertaking in light of the large subsidies now provided by governments at all levels in support of automobile transportation. Reputable economists have computed that the price of gasoline would have to rise to \$12 per gallon in order to reflect all of the costs imposed upon individuals, businesses and governments by automobiles.

What about expansion of The Tide into Virginia Beach? **Extension of The Tide to the Virginia Beach Town Center, one of the city's strategic growth areas, is potentially plausible because it could generate the population density – in the form of residential and business development along that path and especially at Town Center – that would make that extension financially reasonable in the long run. We must recognize, however, that we are talking about 2030, not 2015. Further, we must recognize that while all citizens would pay for the extension, the benefits would accrue predominantly to property owners and businesses situated along the light rail corridor. It's not clear that the same rationale supports any other extensions of the Tide inside the city of Virginia Beach beyond Rosemont Road.**

What dedicated revenue stream should we seek to support our transportation needs? The future of revenue collection relating to automobiles should be connected to taxes based on actual miles driven rather than gallons of gasoline consumed. As our automobiles have become more fuel efficient, we use fewer gallons of gasoline even though those vehicles tear up our roads just as much. We need a mechanism to assess taxes based on miles driven. The technology exists now that would enable us to do so, but we are going to have to overcome our aversion to "being tracked" in order to move ahead. For better or worse, most of us already are being tracked now when we use the telephone

and Internet, by cameras when we are in public places, by toll passes when we drive and perhaps even by drones. An annual mileage computation for tax purposes would be much less intrusive and would accurately impose the costs of driving where they properly reside – on drivers.

All citizens – drivers or not, young or old, employed or not – have a stake in a quality ground transportation system because all of us depend upon that system to deliver the necessities of life and to enable us to reach movie theaters, barber shops, churches, schools, etc. Hence, a significant state general fund contribution from income and sales taxes to transportation is merited, along with regional governmental tax support.

BE WARY OF FRITTERING AWAY PUBLIC FUNDS ON PROJECTS THAT SUBSIDIZE PRIVATE BUSINESSES, EVEN WHEN IT IS APPARENT THAT THE SAME BUSINESSES HAVE CALCULATED CAREFULLY THAT IT WOULD BE UNPROFITABLE FOR THEM TO MAKE SUCH INVESTMENTS ON THEIR OWN

All of the major cities in our region have invested significant public funds in capital projects that were much ballyhooed when they opened, but now contribute only marginally to the region's long-term economic growth. Norfolk's March 2013 decision to make a very large investment in a hotel/conference center in that city's downtown provides the most recent example.

Unfortunately, it is not clear that such projects represent the highest and best use of public funds. Here are some things to consider:

- *Don't ignore the signals private investors provide us, free of charge.* While private developers and investors are not omniscient, their assessments provide us with signals we should not ignore. When private investors decline to put their own money into a restaurant, sports complex, entertainment venue or hotel complex unless they are subsidized, it should give pause to any government that believes that the addition of public money somehow will make those projects compute financially.

- Pay close attention to relevant local market conditions. Consider once again Norfolk's decision to provide huge financial support for a hotel/conference center project in that city's downtown. Is this likely to be a productive investment of public funds? The hotel/motel revenue data reported in Table 4 are discouraging in this regard. **Over the past five years, REVPAR (revenue per available room, the coin of the realm in hotel economics) declined in every area of the region except Virginia Beach, and trailed both Virginia and the United States. Norfolk/Portsmouth experienced a 10.79 percent decline in REVPAR between 2007 and 2012.**

The city of Norfolk believes that the new hotel/conference center will reverse this negative REVPAR trend and reports encouraging recent increases in hotel occupancy and REVPAR in Norfolk. The city concludes that this project will prosper because it will not involve typical convention space; rather, the new project will focus on upscale conferences designed to attract a more technology-savvy, luxury-oriented clientele and also will include additional downtown parking. While all of us wish Norfolk success, achieving profitability could be elusive if the new hotel sells rooms at \$40 more per night than those already available at nearby hotels such as the Marriott and Sheraton.

TABLE 4

REVPAR IN HAMPTON ROADS CITIES, 2007-2012

Area	REVPAR, 2007	REVPAR, 2012	Percent Change
United States	\$65.56	\$65.17	-0.60%
Virginia	\$61.96	\$57.12	-7.80%
Hampton Roads	\$52.90	\$47.63	-9.86%
Chesapeake/Suffolk	\$52.90	\$42.96	-18.79%
Newport News/Hampton	\$41.49	\$35.85	-13.59%
Norfolk/Portsmouth	\$54.05	\$48.12	-10.79%
Virginia Beach	\$64.73	\$66.10	+2.12%
Williamsburg	\$47.48	\$36.95	-22.18%

Sources: Old Dominion University Economic Forecasting Project and Smith Travel Research



- *What can the experience of other cities and regions tell us?* We need not attempt to reinvent the wheel. The experience of other cities and regions should discipline our thinking. For example, The Wall Street Journal reported (Oct. 13, 2012) that between 2000 and 2011, convention and exhibit-hall space in the United States increased 35.4 percent, while attendance at those meeting places fell 1.7 percent. Clearly, it will be important to differentiate the Norfolk development from the usual convention space that has proliferated along the East Coast.
- *Beware the fallacy of composition.* "Fallacy of composition" is the false assumption that something that is true for one individual or business is true for the economy as a whole. Local governments typically count upon their new developments to attract substantial new business to their areas. However, taking the hotel, convention and conference market as an example, all cities cannot increase their hotel, convention and conference business simultaneously at a time when the overall size of that business travel pie is constant or declining nationwide and stagnant in the Commonwealth of Virginia. The available evidence indicates that most cities and regions end up disappointed when they predict they will attract substantial new business.

The solution to that disappointment is not to construct differentiated versions of visions that have failed.

- *Don't ignore the displacement effect. Cities and regions that subsidize highly visible developments typically predict, and then later announce, increased sales and tax revenues from these projects. Initially, of course, this sounds very good. Unfortunately, such developments often do no more than rearrange existing expenditures and tax collections within that city or region.* People end up spending their dollars at one restaurant rather than another, or patronize one hotel rather than another. When this occurs, the projects do not actually result in net new economic development, even though they inevitably report sales, taxes collected, etc. This is economic displacement in action – new developments literally take sales and taxes out of one pocket and deposit them into another.

Virtually every major city in the region has invested substantial funds in subsidized hotels, convention centers, performance venues and athletic facilities. Yes, there have been some large public-sector investment successes, but it's also true that a healthy majority have not been financially successful (at least based on the financial standards of the private sector), despite representing embellishments that comport with elected officials' ideas of what vital, successful cities should include.

Weighed against the long-term economic development that would be generated by a successful K-12 public education system, or measured side to side against the benefits that additional university/medical community research and development expenditures would produce, most of these highly visible investments simply do not cut the financial mustard. **Once again, we should pay attention when private investors tell us that they will not undertake an investment unless they receive tens of millions of dollars in subsidies. They are providing us with free consulting advice that we ignore at our peril.**

BE MODEST WHEN IMPOSING TRAVEL TAXES (TOLLS) ON THE REGION'S BRIDGES AND TUNNELS

Avoid any toll structure that in effect would sever the Peninsula from the Southside (remember that 17.4 percent of those working in Newport News cross the James River estuary every workday) and Eastern Hampton Roads from Western Hampton Roads (24.2 percent of the jobs in Portsmouth and an additional 12 percent of the jobs in Suffolk are filled by people who commute across the Elizabeth River from Norfolk and Virginia Beach). Another 8.2 percent of jobs in Suffolk are held by people who cross the James River. Table 5 provides those data, which should sober those who argue that tolls won't make a difference in our economic behavior.

Note well that it is appropriate to insist upon tolls designed to ensure that those who derive the most benefit from these bridges and tunnels also pay most of the cost. However, the tolls in question risk partitioning our region and increasing the costs to workers, consumers and business owners. Remember that the benefits of a quality transportation system are widely diffused among the region's citizens, whether or not they ever drive across a bridge or through a tunnel. Hence, all citizens, not only drivers, should help pay for these projects.

TABLE 5

SELECTED HAMPTON ROADS WORKERS WHO COMMUTE ACROSS THE ELIZABETH RIVER OR THE JAMES RIVER, 2010

City in Which the Job Is Located	Norfolk	Virginia Beach	Other Southside	Peninsula
Hampton	5.0%	6.5%	11.6%	NA
Newport News	2.9%	4.5%	12.5%	NA
Portsmouth	10.6%	13.8%	NA	7.3%
Suffolk	4.3%	7.7%	NA	8.2%

PROVIDE GENEROUS SUPPORT FOR RESEARCH AND DEVELOPMENT ACTIVITIES AT THE REGION'S RESEARCH UNIVERSITIES AND AT EASTERN VIRGINIA MEDICAL SCHOOL BECAUSE SUCH FUNDS GENERATE A WIDE RANGE OF JOBS THAT TYPICALLY PAY MORE THAN THE REGIONAL AVERAGE AND SPAWN NEW BUSINESS DEVELOPMENT

Old Dominion University is the region's largest academic/medical research and development participant. A year ago, the federal government reported \$95 million in funded research and development (R&D) activity for ODU. However, by comparison, Johns Hopkins University recorded approximately \$1.4 billion and is readily acknowledged to be Baltimore's most powerful economic engine. When one adds all of the other institutions in the region to Old Dominion, the R&D total rises just above \$200 million annually.

Our region simply has not developed the highly productive "ed-med" complex one observes in metropolitan areas such as Richmond and Baltimore. Why does this matter so much? R&D funds nearly always come from "the outside" and thus represent real injections of economic stimulus into the region rather than simply redirecting existing expenditures. (They are not "displaced" expenditures.) This is real economic development involving clean, well-paying jobs, not redistribution of existing economic activity.

What would constitute the outlines of a good action plan in the "ed-med" arena?

- **Press our legislators to provide generous funding for R&D at the region's doctoral research institutions (Old Dominion University, the College of William & Mary and Eastern Virginia Medical School).** Repeated empirical studies reveal that the long-term payoff to public investments in science and engineering R&D exceed 10 percent; very few competing public investments offer the same promise. Unfortunately, the Commonwealth of Virginia has been falling short in terms of funding higher education and medical education. Table 6 reveals that ODU in particular has received the short end of the Commonwealth funding stick, though in truth, state general fund support for all of higher education has fallen significantly in recent years.

- **Find ways to support Hampton University's Proton Therapy Institute, a state-of-the-art cancer treatment and research facility.** In the most recent session, the General Assembly shied away from providing funding for this private-sector initiative; we must find innovative ways for the Commonwealth to provide financial support because the institute already has proven to be a job generator.
- While not everyone has the same vision for the future of EVMS, a merger between it and William & Mary no doubt would confer prestige on the medical school. **Yet, because of the relatively small size of W&M, the absence of engineering there and its distance from EVMS, such a merger would do little to spur the long-term development of the university/medical/health research dynamo that we have been missing. This will occur only when EVMS and ODU merge or affiliate. Our region ought to be thinking about where it wishes to be in 2030, when Old Dominion likely will enroll 40,000 students and be generating \$400 million annually in externally funded research. At that point, a decision to meld together EVMS and ODU will appear to have been obvious.**



TABLE 6
**COMMONWEALTH GENERAL FUND SUPPORT FOR SELECTED
VIRGINIA UNIVERSITIES, FY 2009 AND FY 2013**

Institution	FY 2009 Tax Support Per Student	FY 2013 Tax Support Per Student	Percent Change
Doctoral Institutions in Virginia			
William & Mary	\$9,024	\$8,057	-10.7%
George Mason University	\$7,079	\$5,291	-25.3%
Old Dominion University	\$7,100	\$5,393	-24.0%
University of Virginia	\$10,555	\$8,334	-21.0%
Virginia Commonwealth University	\$8,855	\$6,272	-29.25%
Virginia Tech	\$8,727	\$6,289	-27.9%
Comprehensive Institutions in Hampton Roads			
Christopher Newport University	\$6,108	\$5,135	-15.9%
Norfolk State University	\$11,068	\$7,384	-33.3%

**CAPITALIZE ON OUR EXISTING DISTINCTIVE STRENGTHS – NASA
LANGLEY, THE JEFFERSON LAB, THE PORT, TOURISM AND CERTAIN
SPECIALTIES AT OUR RESEARCH UNIVERSITIES**

NASA Langley Research Center, the Thomas Jefferson National Accelerator Facility and the most superb deep-draft port on the East Coast are located in Hampton Roads, not in Baltimore, Raleigh-Durham or Jacksonville. We still have achieved only limited success in commercializing the research generated by NASA Langley and the Jefferson Lab. Nor have we yet taken the steps necessary to capitalize on the water that flows through so much of our region. Hampton Roads ought to be the nation's leader in rising sea level research and applications. Further, since even the most modest projections suggest that container traffic at our port can grow twice as fast as the United States' gross

domestic product, we are negligent if we don't do the things necessary to enable us to achieve this goal and then sprint well beyond it.

It would be wonderful if Google or some other technology giant were to establish a huge presence in Hampton Roads, but we shouldn't count on such occurrences. Instead, let's capitalize on the impressive physical and intellectual assets already located here. A May 31, 2013, Washington Post article ("What Sequester?" by Elizabeth Williamson) provided data revealing that since 2000, federal spending in the Washington, D.C., metropolitan region has held relatively constant; however, the regional economy there has grown approximately 50 percent because the area's economic base has diversified. As Steve Fuller, a George Mason University economist, noted, "The stuff we learned how to do for the federal government can be sold to other people." This is advice we should take to heart.

**MAINTAIN A BUSINESS-FRIENDLY CLIMATE THAT ESCHEWS TAX
RATES AND REGULATORY POLICIES THAT WOULD POSITION OUR
REGION AS AN EXPENSIVE OUTLIER**

Lest anyone misunderstand: taxes and regulations are necessary to operate a civil, productive, growing society. Nevertheless, we would be wise to recognize that individual citizens, businesses and capital in general are mobile. We must avoid tax and regulatory policies that position us badly with respect to our peers; and, we should focus our large public investments on things that ultimately will improve both the business and the social climates of our region.

Each of our regional cities claims to be business friendly and, indeed, some national surveys suggest Hampton Roads is amenable to economic development. Even though Entrepreneur magazine recently recognized Norfolk as a great site for entrepreneurs, our regional rate of new business formation is not very impressive and we suffer from a net out-migration of adults. (This may be the most critical economic thermometer of them all.) These facts speak louder than our words. Hence, whether via city governments, universities or businesses and regional organizations (or any combination thereof), we would do well to re-examine our thinking about what we can do to stimulate new business formation and support those businesses already here.



ENGAGE IN "ECONOMIC GARDENING" DESIGNED TO GROW EXISTING FIRMS

Our best prospects for stimulating economic growth often may arise via the process of "gardening" the businesses already operating in our region. The essence of gardening is to find out what existing firms need in order to expand and prosper. Emphasis should be upon making connections and smoothing the way for expansion rather than providing large financial injections to the firms involved. Our gardening focus should be upon firms that already have invested their own risk capital and have demonstrated they have what it takes to succeed.

For example, if a promising firm is small and needs additional capital, then we should connect it with possible funding sources. If it requires the assistance of engineers or operations research experts to improve its production processes, or could benefit from guidance on how to obtain an export permit, then we should put the firm in touch with individuals with the appropriate expertise. If it needs better transportation access to expand, or additional attention from law enforcement officials, then government should do its best to see if it can help.

We must find out what would be necessary to convince a large firm such as Siemens in Newport News or a smaller firm such as O'Connor Brewing in Norfolk to expand their operations. Can we eliminate impediments and help such firms do the things that would allow them to expand, hire more people and prosper – here in Hampton Roads?

In the gardening model, economic development personnel spend more time focusing on the needs of existing firms than they do attempting to attract new firms. Ideally, gardening emphasizes finding ways to make life easier for existing firms so they will increase the size of their regional economic imprint rather than viewing them as tax cows ready to be milked. Should financial assistance to existing firms be considered? Yes, on limited occasions, but not if that assistance would directly advantage one existing regional competitor over another, or if the private sector already has signaled that it considers the activity in question to be a dubious investment. Gardening is not about subsidizing losers.

Final Observations

Absent the discovery of oil (North Dakota), a propitious location (the Washington, D.C., metropolitan area) or historically significant inventions and innovations (Silicon Valley and Seattle), the road to regional economic development usually is a long, hard slog. However, there are predictable, profitable payoffs to steady, long-term regional investments in education, infrastructure, technology, research and development, and intelligently crafted public policies. This approach, however, requires patience (a virtue that unfortunately has been in short supply) and an unwavering focus on the distant horizon. We must change our short-sighted approach to economic development if we hope to prosper during this century.

Cover: Estimated Sequester Exposure map: "Federal spending by state," by Bill Testa and Jacob Berman, from Seventh Federal Reserve District Update, Aug. 9, 2013,
http://midwest.chicagofedblogs.org/archives/2013/08/federal_spendin.html

USS George H.W. Bush: Navy.mil

Inside Front Cover: Sara Kidd, Hampton Roads Planning District Commission

Page 1: Steve Daniel

Page 35: Steve Daniel

Page 57: Norfolk Southern Corp.

Pages 102 and 103: David Hollingsworth (ODU's Taste of India Festival, 2013)



